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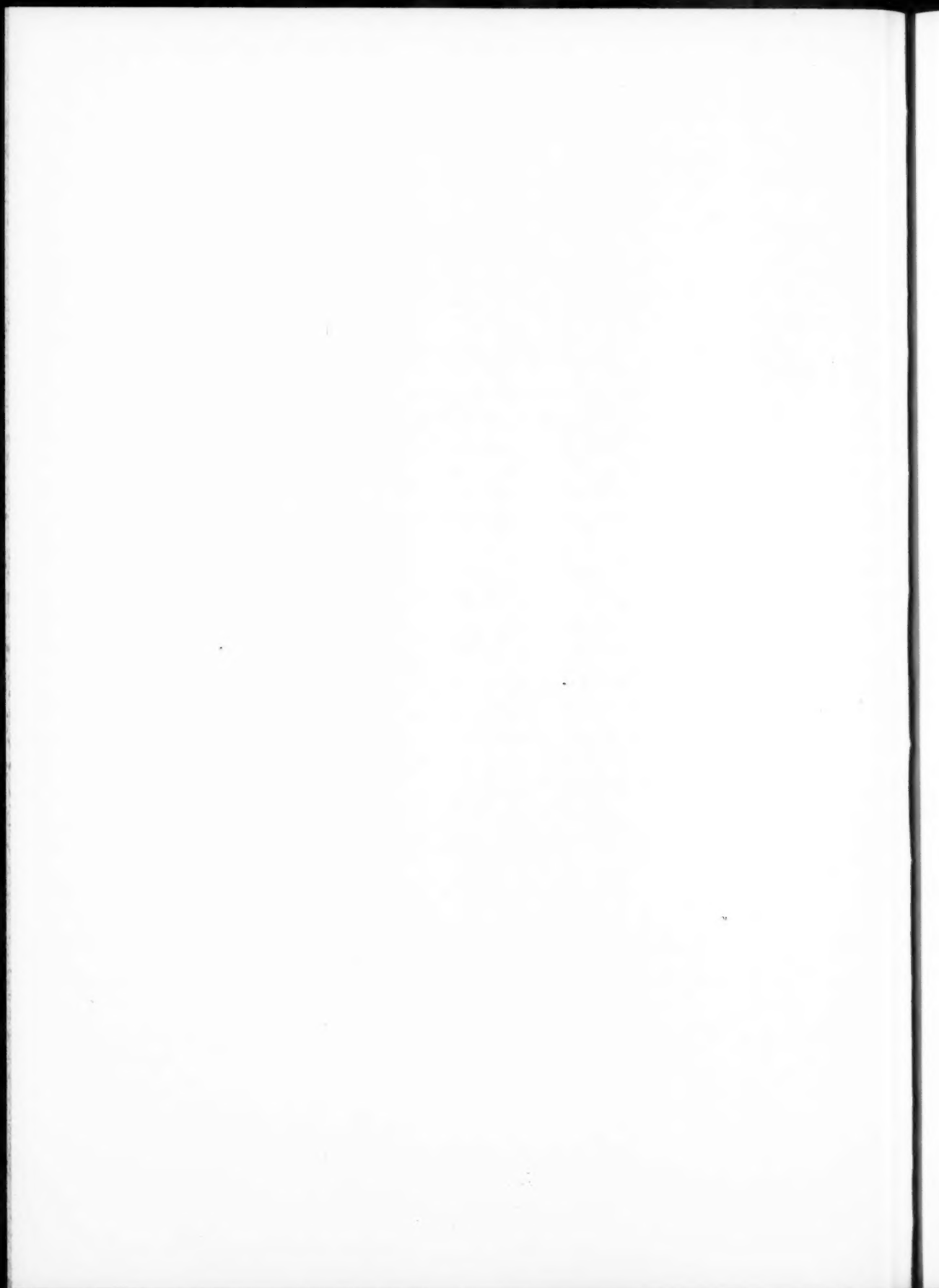
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## ANNOUNCEMENT

The Archaeological Institute of America and the College Art Association jointly announce their sponsorship of a new series of monographs to appear as Supplements either of the *AMERICAN JOURNAL OF ARCHAEOLOGY* or of the *ART BULLETIN*. These Supplements would generally be studies exceeding the normal length of an article, and yet not of the length and scope of a book; they would be similar in format to these two periodicals. It is proposed that the new Supplements should appear at irregular intervals depending upon acceptance and financial arrangements. Manuscripts falling within the scope of the Archaeological Institute should be submitted to Professor Mary H. Swindler, Editor-in-Chief, *American Journal of Archaeology*, Bryn Mawr College, Bryn Mawr, Pa., for consideration by the Committee on Research and Publications. Manuscripts having to do with Early Christian, Mediaeval, Renaissance, Modern and Far Eastern Art, should be submitted to Professor Rensselaer W. Lee, Editor-in-Chief, *The Art Bulletin*, The Institute for Advanced Study, Princeton, N. J.

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## POLYCHROMY IN GREEK SCULPTURE

WITH SPECIAL REFERENCE TO THE ARCHAIC ATTIC GRAVESTONES  
IN THE METROPOLITAN MUSEUM<sup>1</sup>

### PLATES VII-XI

THERE are few subjects in the field of ancient art which have aroused such heated and prolonged controversy as polychromy in Greek sculpture. In looking over the archaeological literature of the past century we find the theme taken up again and again from different points of view and we realize how long it was before the fact became established that the Greeks colored their sculptures. The idea of painted statues somehow filled people with horror, and only after the evidence in its favor had become overwhelming did the supporters of white unpainted sculpture give up their case.<sup>2</sup>

This strong prejudice was of course natural. Ever since the Renaissance artists had produced white marble sculpture, in imitation, oddly enough, of the Greek and Roman examples which they knew and which in the course of time had lost their coloring. It was not easy to give up a belief that had been held for generations and one that had, moreover, started a new practice; for previous to the Renaissance colored sculpture had been the rule. However, as soon as the problem was attacked in the modern scientific spirit the result was inevitable. The statements of ancient writers and the actual traces of color on extant Greek and Roman sculptures were too strong evidence to admit of further doubt that throughout antiquity marble as well as limestone statues and reliefs were painted divers shades. That the colors have so often disappeared is not surprising when we remember the vicissitudes which the sculptures have undergone—exposure to the elements, burial for over two thousand years, and often a thorough cleaning on rediscovery. In many cases, moreover, in which color was noted on the sculptures when they came out of the ground, it vanished soon afterwards on contact with light and air. The fact that any color at all remains is really more remarkable than that it has disappeared in the majority of cases.

The Metropolitan Museum has an important collection of early Attic grave-stones on several of which remains of the original coloring are still visible. On some the traces are so considerable that they have enabled us to reconstruct the original scheme. They not only amplify our comparatively scanty knowledge of early Greek painting and of polychrome sculpture but shed fresh light on several moot points.

<sup>1</sup> The colored plates in this article have been presented by the Metropolitan Museum. A briefer article on the same subject appeared in the April, 1944, Bulletin of the Museum.

<sup>2</sup> The bibliography on polychromy in Greek and Roman sculpture is extensive. The following list gives a selection: Blümner, *Technologie und Terminologie der Gewerbe und Künste* iii, 1884, pp. 200 ff.; Treu, *Sollen wir unsere Statuen bemalen?*, 1884, and *JdI.* iv, 1889, pp. 18 ff., x, 1895, pp. 25 ff.; E. Robinson, "Did the Greeks Paint their Sculptures?," *Century Magazine* xliii, 1892, pp. 869 ff.; Collignon, "La Polychromie dans la sculpture grecque," *Revue des Deux Mondes*, 15 fev., 1895, pp. 845 ff.; Berger, *Die Maltechnik des Altertums*, 1904; Laurie, *Greek and Roman Painting*, 1910, and *The Materials of the*

Lindsley F. Hall's restorations of some of these monuments are here shown in seven drawings and four colored plates. In an article which follows mine he will describe the actual remains of color that could be seen on the monuments. The stones were examined by several of us — Miss Alexander, Mr. Hall, Mr. Hauser, and myself — and the restorations are based on our joint findings. The reproductions speak for themselves. One need not enlarge on the distinction of the designs and the vivacious yet harmonious color effects. A few flat washes, effectively correlated, have produced rich and gay compositions, not necessarily based on nature. They give us a vivid realization of archaic polychrome sculpture and painting before the introduction in the fifth and fourth centuries of a larger palette and — in the case of paintings — of modelling by light and shade.<sup>3</sup>

The monuments are of the two types which — to judge by the present evidence — were current in Attica during the sixth century — an earlier one with a capital of either cavetto or double-volute form carved in a separate piece from the shaft and surmounted presumably by a sphinx (fig. 1), and a later one with a palmette finial carved in the same piece with the shaft (fig. 7). Though several examples of the later type are in fairly good preservation, only one of the earlier, elaborate form has survived more or less complete, the New York "Megakles" or brother-and-sister stele. The others are mere fragments, consisting of parts of crowning sphinxes, capitals, shafts, and inscribed bases. They are of marble or limestone. The representations on the shafts and capitals are in relief, incised, or merely painted. Architects, sculptors, and painters apparently collaborated to produce these monuments, which must have been made chiefly for the wealthy, aristocratic families of early Athens; for it is only they who could have afforded such sumptuous memorials at a time when wealth was not widespread and the art of monumental sculpture in stone comparatively new.

I have discussed the style and chronology of these Attic monuments in my *Archaic Attic Gravestones* (Martin Classical Lectures x).<sup>4</sup> In this article I shall, therefore, confine myself to the subject of their polychromy, mentioning first the new evidence presented by the New York material and then reviewing the general subject of polychromy in Greek sculpture, especially in regard to the treatment of the nude areas.

The colors that occur on the New York stones — red, black, blue, and green — belong to the regular palette of the archaic Greek artist, which was the same as the Egyptian and Minoan; it also included yellow, of which, however, there is no trace on our stones.<sup>5</sup> The commonest shade is red, which appears to have withstood best

*Painter's Craft*, 1910; E. Mackay, *Ancient Egypt*, 1920, pp. 35 ff.; Eibner, *Entwicklung und Werkstoffe der Wandmalerei*, 1926; Swindler, *Ancient Painting*, 1929, pp. 138 ff.; Richter, "Were the Nude Parts in Greek Marble Sculpture Painted?", *MMS.* i, 1928, pp. 25 ff., and *Sculpture and Sculptors*, 1930, pp. 148 ff.; Lucas, *Ancient Egyptian Materials and Industries*<sup>2</sup>, 1934, pp. 282 ff.; Nina M. Davies and A. H. Gardiner, *Ancient Egyptian Paintings*, 1936, pp. xxxi ff.; E. Dow, "The Medium of Encaustic Painting," *Technical Studies* v, 1, 1936, pp. 3 ff.; Burdick, *ibid.* vi, pp. 183 ff.

<sup>3</sup> On this epoch-making evolution cf. my *Greek Painting, The Development of Pictorial Representation from Archaic to Graeco-Roman Times*, 1944.

<sup>4</sup> Hereafter referred to as *A.A.G.*

<sup>5</sup> For analyses of the colors used by the Egyptians and Greeks and a discussion of the possible media we refer the reader to the works of E. Berger, N. M. Davies, A. Eibner, A. P. Laurie, A. Lucas, E. Mackay, and E. Dow listed above.



FIG. 1.—GRAVESTONE OF A YOUTH AND HIS SISTER, ABOUT 540 B.C. (see Fig. 5 and Pl. vii).  
(Courtesy of the Metropolitan Museum)



FIG. 2.—GRAVESTONE OF A WARRIOR, ABOUT 530  
B.C. (see Pls. VIII-IX)

(Courtesy of the Metropolitan Museum)

the ravages of time. Blue often turned to green, but brilliant blue and brilliant green appear side by side on separate bands of a guilloche pattern (pl. ix), and copious traces of bright blue occur on the greaves of the warrior (pl. ix), on the sphinx of the brother-and-sister stele (pl. vii), and on the early limestone sphinx (figs. 9, 10). Black evidently played an important part, alternating with red in effective patterns. In the capitals (figs. 4, 5), the finials (figs. 6, 7), and the limestone sphinx (plate x), the scheme was apparently red and black. The black background in pl. viii, which recalls red-figured vase-paintings, is unusual in stone reliefs, the prevalent shades for such backgrounds being red (figs. 1, 7, 8) or blue. In marble sculpture the "reserved" white surface of the stone took the place of the white pigment used on limestone (figs. 9, 10) and terracotta.

Though it is now an accepted fact that Greek sculpture was painted, there is still considerable controversy about the nude areas, for it is undoubtedly true that on the great majority of marble sculptures on which traces of color have survived on the drapery or hair none has been found on the flesh. And many people hesitate to believe that the Greeks would have obscured most of the surface of their beautiful marbles with paint, as would have been the case, for instance, in nude statues. Before discussing this important problem we must call attention to two pieces of evidence presented by our gravestones which bear on this question.

(1) The nude youths on the gravestones shown in figs. 7 and 8 were merely painted, without incisions.<sup>6</sup> The

<sup>6</sup> *A.A.G.*, pp. 105, 107, figs. 103, 104.

only color that has survived is red on the background. The contours and inner markings which now stand out as "reserved" white were doubtless originally black; for actual black traces on such lines appear on the stele of Lyseas<sup>7</sup> and a fragment in Athens.<sup>8</sup> It is noteworthy that these contours (as well as the inner markings) are less weathered and slightly more prominent than the surface of the figure, though flush with the red background. Evidently the black color protected these lines, whereas the surface of the figures was more exposed to weathering. Therefore, if a color was used on the nude areas of these figures, it must have been more evanescent or less thickly applied than the black on the contours and inner markings.<sup>9</sup>

(2) Mr. Hall was not able completely to restore the original colors on the chariot scene<sup>10</sup> shown in fig. 3 and pl. VIII for lack of actual color traces on certain areas (p. 334). He had, for example, to leave the warrior's helmet and spear white, though they were doubtless red or black, and to make the charioteer a ghostlike white figure, though here, too, there must have been some color. Let us examine this charioteer more closely. He wears a helmet, like the charioteer of Amphiaraios on the Corinthian krater in Berlin,<sup>11</sup> and a chiton which he has pulled over his belt to form a *kolpos* or pouch. The pouch is represented in profile to the right, the folds it causes in full front. We are familiar with such renderings in contemporary vase-paintings.<sup>12</sup> But in our charioteer the bounding lines of the chiton on neck and shoulder are not marked by incised lines and were therefore presumably indicated by the contrasting tones of flesh and chiton.<sup>13</sup> As the chitons of charioteers are regularly white on the black-figured vases contemporary with our marble panel, it is likely that our charioteer's chiton was also white.<sup>14</sup> And if the chiton was "reserved" white, it would follow that the contrasting shade on his arm and neck was a flesh color.<sup>15</sup>

How do these observations fit into the general picture? The cumulative evidence that the flesh in Greek sculpture was not left in the snow-white color of marble, particularly in the case of male figures, is strong. Both in Egypt and Crete colored flesh for male figures, both in the round and in relief, was the rule for white limestone (marble was not used). It is not likely that the Greek artists broke with a long tradition in this respect. And we have definite evidence that they did not. In the archaic limestone pediments from the Akropolis the male figures—Herakles, Iolaos, the "Bluebeard," etc.—have rose-colored flesh.<sup>16</sup> On some of the archaic metopes from

<sup>7</sup> Conze, *Att. Gr.* i, no. 1, pl. 1; Rodenwaldt, *AD.* iii, p. 32, pls. 32, 33; K. Müller, *A.A.* 1922, cols. 1 ff., Beilage I; *A.A.G.*, p. 102, fig. 94. <sup>8</sup> Conze, *Att. Gr.* i, no. 15, pl. ix, 2; *A.A.G.*, p. 105, fig. 101.

<sup>9</sup> Cf. on this subject K. Müller, *op. cit.*, cols. 4 f.

<sup>10</sup> *A.A.G.* pp. 54 ff., fig. 67.

<sup>11</sup> No. 1655; *FR.* iii, pl. 121.

<sup>12</sup> Cf. e.g. Langlotz, *Gr. V. in Würzburg*, pl. 88 (Neoptolemos); pl. 51, no. 209, pl. 40 (women); pl. 52, no. 213.

<sup>13</sup> We may compare, for instance, the well-known torso no. 599 from the Akropolis (Schrader, *Marmorbildwerke der Akropolis*, pl. 130), where the bottom of the cuirass is shown in relief but the bounding line at the top is omitted, and the Herakles of the Eastern pediment of Aegina, where the edge of the cuirass is not marked in relief at the neck.

<sup>14</sup> His garment is of the long type, though it appears somewhat shorter than usual, having been pulled up to form the pouch—like Dionysos' on the amphora no. 209 in Würzburg, Langlotz, *op. cit.* pl. 51, and the chitons of the nymphs on the relief from the Akropolis, no. 430.

<sup>15</sup> K. Müller, *loc. cit.*, came to a similar conclusion regarding the stele of Lyseas, whose right forearm is placed against a white mantle and was therefore presumably painted a contrasting shade.

<sup>16</sup> Cf. Dickins, *Catalogue*, nos. 1, 2, 31, 35, 36, 48; Broneer, *Hesperia* viii, 1939, p. 93.





FIG. 3.—PANEL OF THE GRAVESTONE SHOWN IN FIG. 2

Selinus a reddish color survived on the flesh of male figures, at least when the reliefs first came out of the ground (1822–1823).<sup>17</sup> Naturally on porous limestone color would survive longer than on the closer-grained marbles. But also in marble sculptures we have undoubted examples with colored flesh, of male figures in the early periods and of male and female in the later: for instance, the fragmentary archaic head B 93 in the British Museum,<sup>18</sup> a relief in the Acropolis Museum<sup>19</sup> (about 470 B.C.), the figures on the Mausoleum frieze,<sup>20</sup> on a fourth-century rock tomb at Myra,<sup>21</sup> on the Alexander sarcophagus,<sup>22</sup> and on the Graeco-Roman head from the Esquiline in the British Museum.<sup>23</sup> These marbles, which include examples in the round and in relief, from archaic to Roman times, can hardly be isolated instances, but doubtless follow an accepted convention.

Ancient writers, though they supply notoriously little information regarding technical matters, give some help in this problem of how nude portions in marble figures were treated. In the well-known passage about the application of red color to the exposed parts of a building Vitruvius<sup>24</sup> says: "Though it [red] keeps its color perfectly when applied in the polished stucco finish of closed apartments, yet in open apartments, such as peristyles and exedrae or other places of the sort, where the bright rays of the sun and moon can penetrate, it is spoiled by contact with them, loses the strength of its color, and becomes black. . . But if anyone . . . should wish the red finish to retain its color he must, when the wall is finished and dry, rub over it with a stiff brush Punic wax melted and diluted with a little oil; and afterwards with live coals in an iron vessel heat the wall so thoroughly as to make the wax tacky and then smooth it; then rub it down with a candle and clean cloths, *just as nude marble figures are treated*. This process is termed *ganosis* in Greek. The protecting coat of Punic wax prevents the light of the moon and the rays of the sun from licking up and drawing the color of such polished finishing." This is repeated by Pliny,<sup>25</sup> who ends

<sup>17</sup> Benndorf, *Metopen von Selinunt*, p. 46.

<sup>18</sup> Pryce, *Catalogue*, p. 52. Its resemblance to B 90 make it likely that it is male.

<sup>19</sup> Dickins, *Catalogue*, no. 577. <sup>20</sup> Newton, *Travels and Discoveries in the Levant* ii, p. 131.

<sup>21</sup> Fellows, *An Account of Discoveries in Lycia*, 1840, plates after p. 198.

<sup>22</sup> Hamdy Bey and Th. Reinach, *Une Nécropole royale à Sidon*, pls. xxxiv ff., p. 329: "jaune clair, ou foncé, semble-t-il, suivant qu'il s'agit d'un Grec ou d'un Oriental, par endroits même teinté de rose." Winter, *Der Alexandersarkophag*, p. 9, speaks only of a "ganz leichten, teils ins Gelbliche, teils ins Rötliche spielenden Überzug" on the nude areas, without mentioning a differentiation between Greeks and Persians.

<sup>23</sup> Treu, *JdI*, iv, 1889, pp. 18 ff., pl. 1: A. H. Smith, *Catalogue of Greek Sculpture*, no. 1597.

<sup>24</sup> *De Architectura* vii, 9, 2–4: itaque cum est in expolitionibus conclavium tectis inductum, permanet sine vitiiis suo colore; apertis vero, id est peristylis aut exhedris aut ceteris eiusdem modi locis, quo sol et luna possit splendores et radios immittere, cum ab his locus tangitur, vitiat et amissa virtute coloris denigratur . . . at si qui subtilior fuerit et voluerit expolitionem miniaceam suum colorem retinere, cum paries expolitus et aridus fuerit, ceram punicam igni liquefactam paulo oleo temperatam saeta inducat; deinde postea carbonibus in ferreo vase compositis eam ceram una cum pariete calfaciundo sudare cogat lietque, ut peraequetur; deinde tunc candela centunculisque puris subigat, uti signa marmorea nuda curantur (haec autem γάνωσις graece dicitur): ita obstans cerae punicae lorica non patitur nec lunae splendorem nec solis radios lambendo eripere ex his politionibus colorem. The translation "make tacky" for cogat sudare I owe to Mr. Beazley, who was kind enough to read my Ms. and send me some notes.

<sup>25</sup> *N.H.* xxxiii, 122. The two passages are so similar that Vitruvius and Pliny must have drawn from the same source or else Pliny must have copied Vitruvius (cf. Schanz and Hosius *Geschichte der römischen Literatur* ii, p. 393).

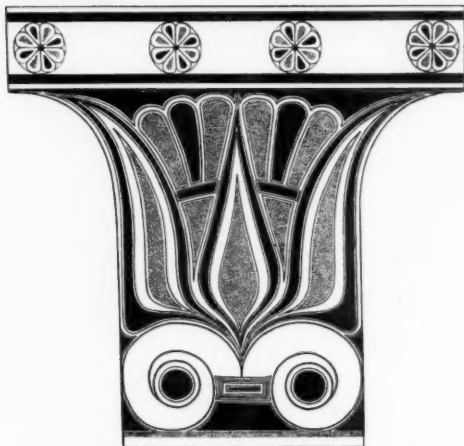


FIG. 4.—CAVETTO CAPITAL FROM A GRAVESTONE,  
ABOUT 560-540 B.C.

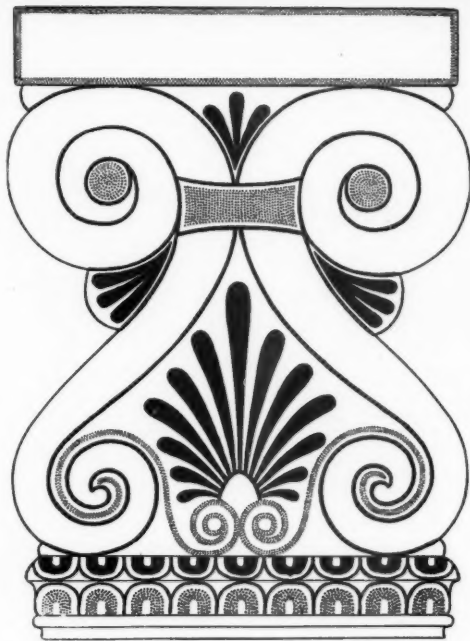


FIG. 5.—VOLUTE CAPITAL OF THE GRAVESTONE  
SHOWN IN FIG. 1

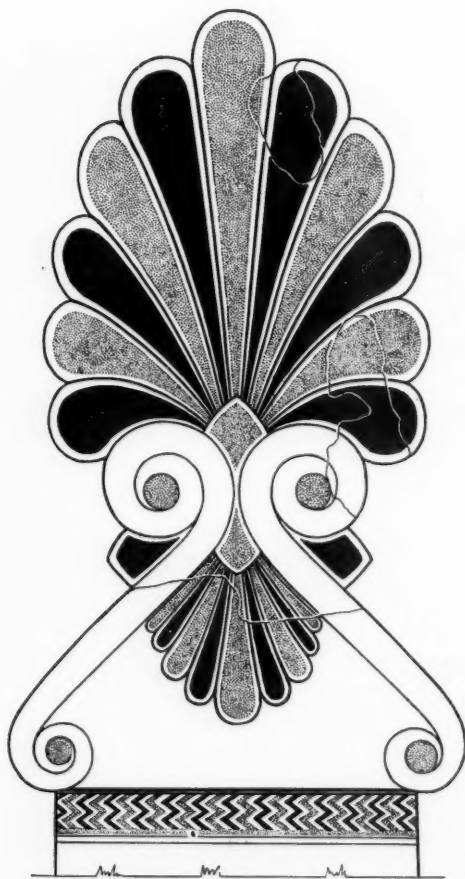


FIG. 6.—PALMETTE FINIAL OF A GRAVESTONE, RE-  
CONSTRUCTED FROM THREE FRAGMENTS,  
ABOUT 530-525 B.C.

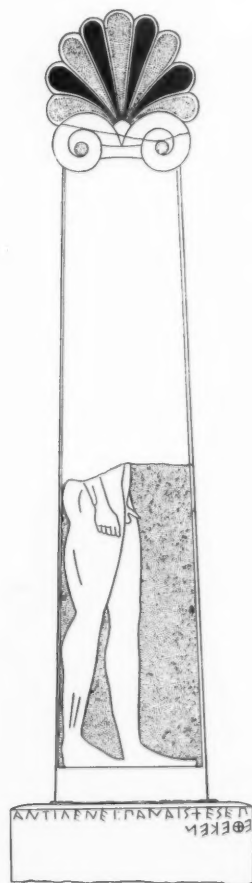


FIG. 7.—GRAVESTONE ERECTED BY  
PANAISES TO HIS SON ANTIGENES,  
ABOUT 510 B.C.

(Courtesy of the Metropolitan Museum)



"as one treats marble figures to make them brilliant."<sup>25a</sup> Perhaps an echo of these descriptions is found in Plutarch's<sup>26</sup> statement "The *ganosis* of the statue [of Jupiter Capitolinus] was necessary, for the red ochre with which they used to color ancient statues soon fades."

To explain this evidence a belief became current and is still widely held that an application of wax and oil on the marble gave it an ivory tone approximating the color of flesh. However, practical experiments have repeatedly shown the fallacy of this belief. Wax, heated and applied according to Vitruvius' receipt, hardly affects the color of marble, leaving it almost white.<sup>27</sup> And that the purpose of the wax application was not to tone the marble but to preserve the color already on it is clearly implied by Vitruvius' description of *ganosis* and by the fact that Punic wax known for its purity<sup>28</sup> was used.

We must therefore find another way out of the dilemma—we must accept the fact of colored flesh in Greek sculpture, but we must find some means of coloring which did not obscure the surface of the stone and was not long-lived. Practical experiments in this Museum<sup>29</sup> have shown (1) that a flesh color, if applied as a *thinnish wash*, does not obscure the surface of the marble, and (2) that a wax coating—the *ganosis* referred to by Vitruvius—is necessary to prevent such an application from being affected by water. Without a wax coating the thinly applied color could easily be removed with a wet rag; when protected by a wax coating, it could not. In sculpture placed out of doors a wax coating was therefore a necessity. In the course of time the wax would, of course, disintegrate. A thinly applied color would then naturally disappear more rapidly than a more thickly applied one, especially if put on the smooth, polished surface favored for nude areas, instead of the slightly rough ones used for hair, drapery and backgrounds of reliefs.

The exact procedure can only be conjectured, for we know little about ancient media and vehicles. In our experiments we used red and yellow ochres for our colors, egg for the medium.<sup>30</sup> For the wax coating we heated beeswax, and added a small amount of olive oil (as Vitruvius and Pliny prescribe), rubbed the solidified mixture lightly over the dried painted surface, and then applied heat sufficient to remelt the wax by holding a hot smoothing iron close to the surface; after wax and marble had cooled, the wax was lightly polished and the whole acquired the sheen of flesh. In another experiment we added the color to the liquid wax, applied the mixture while still warm with a stiff bristle brush, and later applied heat again with the smoothing iron. We found the former experiment easier to manipulate.<sup>31</sup>

That wax was used in the application of color on marble sculptures and buildings, either as a coating or mixed with the pigment, is known not only from the description in Pliny and Vitruvius but from other literary and epigraphical evidence. In the

<sup>25a</sup> Sicut et marmora nitescunt.

<sup>26</sup> *Quaest. Rom.* 287 D.

<sup>27</sup> Treu, *JdI.* iv, 1889, p. 23 f.; Richter *MMS.* i, 1928, pp. 26 ff.

<sup>28</sup> Pliny, *N.H.* xxi, 83-4.

<sup>29</sup> In these experiments I have had the expert help of Messrs. Murray Pease, Cordray Simmons, and Charles Wilkinson.

<sup>30</sup> Instead of egg, size or gum, which are likewise soluble in water, could have been used as media. A water-miscible medium is obviously desirable since it must not be readily affected by oil or wax.

<sup>31</sup> Today wax can be kept liquid indefinitely either as an emulsion or dissolved in a solvent; but we have no evidence that the ancients knew of such a method.

building inscription of the Erechtheion (408–407 B.C.) “encaustic painters” (ἐγκαυσταί) are mentioned as having decorated a marble moulding.<sup>32</sup> The term “encaustic statue maker” occurs in a Roman inscription.<sup>33</sup> Plutarch speaks of “encausters of statues.”<sup>34</sup> In the temple inventories at Delos purchases of wax and oil are listed for the treatment of statues, sometimes for the same statue in different years, indicating that the wax application had to be periodically renewed.<sup>35</sup>

Moreover the presence of wax has been noted in actual examples. It appears in a partly disintegrated condition, together with a flesh color, on the face and neck of the marble head of a woman in the British Museum.<sup>36</sup> Analyses of the colors used in some of the painted ornaments of Greek marble temples have shown the presence of wax;<sup>37</sup> and in Egyptian paintings of the eighteenth dynasty wax has been found as a coating.<sup>38</sup>

Furthermore we know from the statements of ancient writers and from inscriptions that in paintings an “encaustic” technique was used from the fifth century down.<sup>39</sup> Pliny<sup>40</sup> mentions “encaustic” pictures by Polygnotos; in a building inscription from Delos (207 B.C.) “encaustically” painted plaques of a stoa are listed;<sup>41</sup> and

<sup>32</sup> Caskey in Stevens and others, *Erechtheum*, pp. 277, 368, 380 ff., 394 f. 404, 405, 407, 410.

<sup>33</sup> *IG*, xiv, no. 1494; Loewy, *Inscriften*, no. 551.

<sup>34</sup> *De Gloria Athen.* 6, p. 348 F.: “They are like the toilet-makers and chair-bearers of a luxurious woman; or rather like the encausters and gilders and colorers of statues” (ἀγαλμάτων ἐγκαυσταὶ καὶ χρυσωταὶ καὶ βαφεῖς).

<sup>35</sup> Homolle, *BCH*, xiv, 1890, p. 497 ff.

<sup>36</sup> No. 1597. Treu, *JdI*, iv, 1889, pp. 18 ff.

<sup>37</sup> Berger, *Maltechnik des Altertums*, pp. 144 ff.; Eibner, *Entwicklung und Werkstoffe der Wandmalerei*, p. 69.

<sup>38</sup> Mr. Charles Wilkinson has supplied me with the following note: “E. Mackay in *Ancient Egypt*, 1920, pp. 35 ff., in discussing the use of wax and resin on the tomb paintings of the xviii<sup>th</sup> dynasty, makes the suggestion that not only was the wax used as a coating or fixative, but also was mixed with the pigment before being applied to the wall. He came to that conclusion from R. Mond’s analysis which showed that wax had thoroughly permeated the paint layer, although he also admits the possibility that the wax was applied to the surface with the assistance of heat and so was absorbed by the paint.

“The fact, however, also noted by Mackay, that wax remains as a partially opaque skin on the surface, readily detachable from the color beneath, would seem to indicate that the surface application was the method employed. This is made more certain because the removal of this skin shows the painting underneath has precisely the same character in brushwork and drawing as that under resin used as varnish, and as that in the paintings with no surface treatment whatever.

“Where the wax was only applied to certain colors or portions of a painting, it has spread and run over the outline onto the adjacent untreated surfaces. This would not be the case if the pigment had been mixed with the wax in any easily workable form required by the smooth brushing in of Egyptian painters, but would occur if applied to the surface and heated, for the absorption of the wax would not be controlled and it would be bound to spread.

“It seems likely that the Egyptians discovered that the surface treatment of wax and resin to heighten the effect of the colors was not successful because the wax gradually became opaque and the resin turned brown. The use of both of them was abandoned in tomb painting by the end of the xviii<sup>th</sup> dynasty, though for coffins resin was employed for many centuries later. Egyptian tomb paintings were of course not exposed to the weather so that the use of wax and resin for protection would not be necessary.”

<sup>39</sup> Berger, *op. cit.*, pp. 185 ff., has collected the most important references. Among them is one to Pliny’s account of wax and its properties in which he speaks of adding various pigments to wax to render it black, red, and other shades “in imitation of nature” (*N.H.* xxi. 85).

<sup>40</sup> *N.H.* xxxv, 122; cf. also Lucian, *Eikones*, 23.

<sup>41</sup> Schulhof, *BCH*, xxxii, 1908, no. 21, l. 25, p. 93, pl. opposite p. 83, and Lattermann, *ibid.*, pp. 285 f.; Durrbach, *Inscriptions de Délos*, no. 366, l. 25.

the dry climate of Egypt has preserved for us examples of such paintings in the well-known mummy portraits from the Fayum (I-IV century A.D.<sup>41a</sup>). There is therefore no difficulty in supposing that the techniques suggested by us — or similar ones — were used in ancient times.

In our discussion we have been chiefly concerned with predicating a flesh color for male figures. Whether the flesh of female figures was also tinted is another question. To judge from the present evidence it was perhaps left white in the archaic period, colored in the later periods. We must remember that in the sixth and fifth centuries female figures were regularly draped and that the undraped portions were therefore not extensive. Though in Egyptian paintings the flesh of women is generally yellow or light brown and only exceptionally white, in Minoan paintings it seems to have been regularly white.<sup>42</sup> On black-figured vases the convention is white for the flesh of women, black (occasionally red) for that of men. In a sacrificial scene on a recently discovered archaic wooden panel the women have white flesh, the boys brown.<sup>43</sup> In archaic terracotta plaques and sculptures the flesh of women is white, that of men yellow or brown.<sup>44</sup> The same applies to early Etruscan mural paintings. On an early archaic limestone sphinx white is preserved on the flesh<sup>45</sup> (figs. 9, 10). The accepted convention in the archaic period seems, therefore, to have been white flesh for female figures, with color only on lips and eyes, and often on cheeks.<sup>46</sup>

By the fourth century, however, when nude statues of women were common and

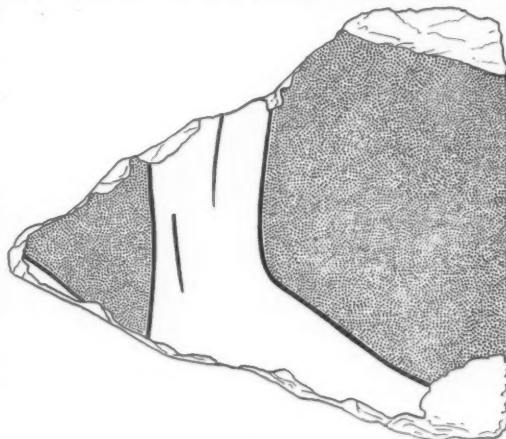


FIG. 8.—FRAGMENT OF A GRAVESTONE, ABOUT 510 B.C.  
(Courtesy of the Metropolitan Museum)

<sup>41a</sup> H. Drerup, *Die Datierung der Mumienporträts*, 1933.

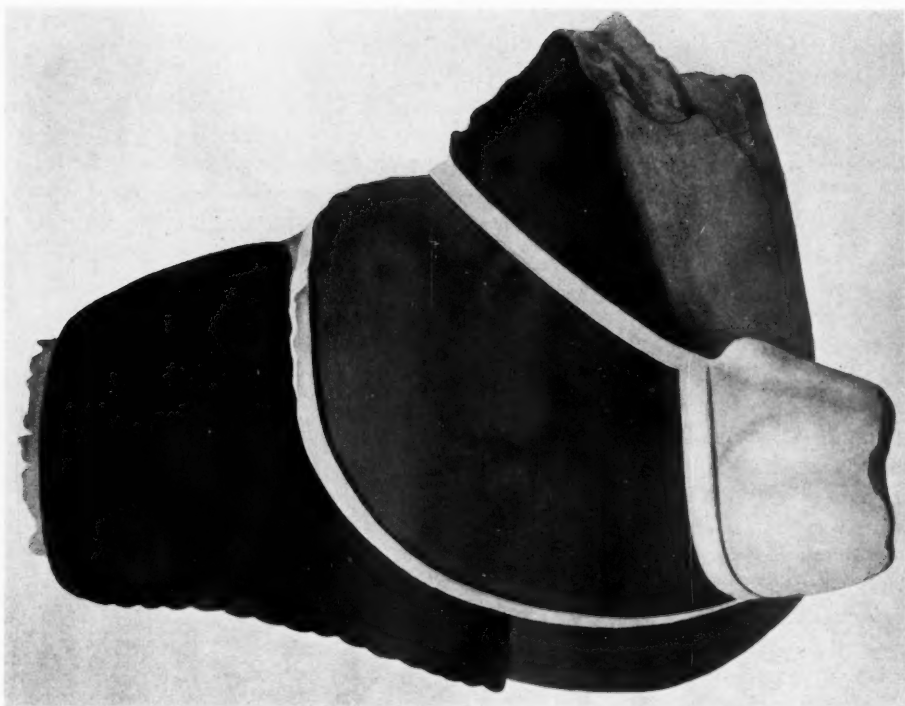
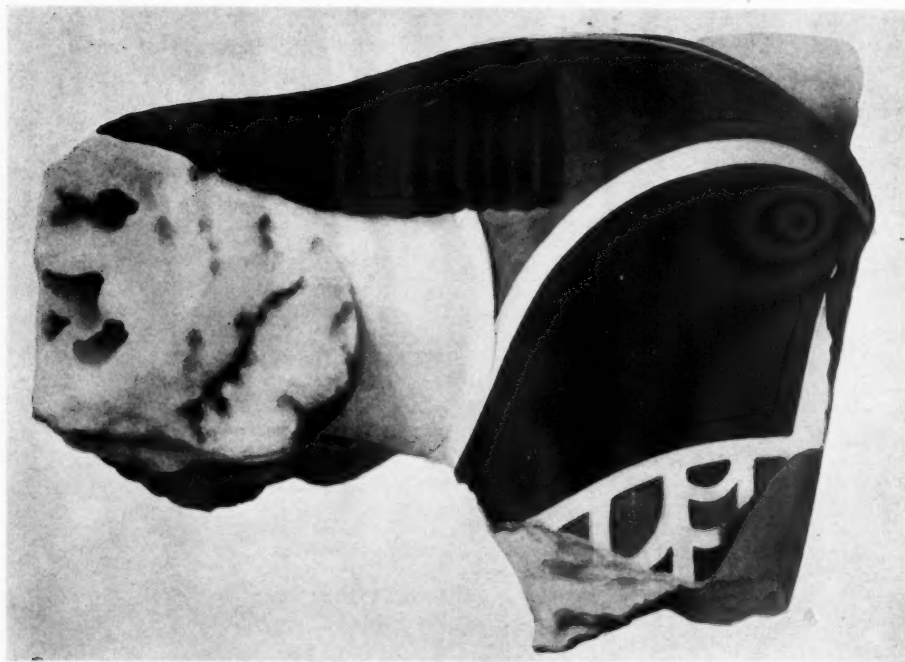
<sup>42</sup> Ambrose Lansing has supplied me with the following note: "I think it would be safe to say that the standard in all three techniques (sculpture, relief, and painting) is: Women are painted yellow or a light brown. Occasionally where the ground is white a woman or a goddess may not be painted at all, but these cases are very exceptional. Where the stone is colored, as in granite or basalt, it is not usual to use paint, except for details of features."

<sup>43</sup> Schefold, *AA*, 1934, col. 194 f.; Orlandos, *AJA*, xxxix, 1935, p. 5; E. P. Blegen, *AJA*, xxxix, 1935, p. 134.

<sup>44</sup> For instance, the metopes from Thermos, Soteriades, *AD*, ii, pp. 5 ff., pls. 50 ff., the group of Zeus and Ganymede from Olympia (Kunze, *Hundertstes Winckelmannsprogramm* 1940, pp. 27 ff.), and the many statuettes of seated goddesses from the Athenian Akropolis and elsewhere. Mr. Beazley reminds me that "a brown flesh colour is often used on 7th century vases (Chigi vase, etc.)."

<sup>45</sup> *A.A.G.*, p. 19, figs. 33, 34.

<sup>46</sup> For instance, Brooke in Casson and Brooke, *Catalogue of the Acropolis Museum* ii, p. 337, speaks of bright pink on the cheeks of archaic terracotta female figures; and a fifth-century terracotta bust of a woman from Sardis in New York has pink preserved on the cheeks, acc. no. 26.199.67, *MMS*, i, 1928, p. 27, fig. 3. Female figures on Chalcidian vases sometimes have red patches on the cheeks, Mr. Beazley reminds me.



FIGS. 9, 10. — PART OF A SPHINX, PERHAPS FROM A GRAVESTONE, ABOUT 610-600 B.C.  
(Courtesy of the Metropolitan Museum)

a naturalistic rendering had taken the place of the earlier conventions, it seems likely that the flesh of women was regularly tinted. We have important witnesses of such color application in the fourth-century reliefs from Myra, in which the flesh of the women is pinkish;<sup>47</sup> in the Hellenistic marble gravestones from Pagasai, now in the Museum at Volo, in which the flesh of the women as well as that of the men is naturalistically colored;<sup>48</sup> in the Etruscan marble sarcophagus in Florence where the Amazons have light-colored flesh;<sup>49</sup> in the Graeco-Roman marble head in the British Museum, which has pinkish color preserved on the face;<sup>50</sup> and in the pinkish female statues which are occasionally represented in Graeco-Roman murals.<sup>51</sup>

To impart the delicate, variegated tones that in the later periods had taken the place of the archaic washes was evidently a fine art and great painters were engaged to color the statues. According to Pliny,<sup>52</sup> when Praxiteles was asked "which of his marble statues he prized most highly he replied 'those to which Nikias [a famous painter] had put his hand', so much did he prize the *circumlitio* of that artist." And Lucian,<sup>53</sup> in his description of an imaginary portrait of an ideally beautiful woman, calls in first Pheidias, Alkamenes, and Praxiteles to impart the form, and then the great painters Polygnotos, Euphranor, and Apelles to add the colors and to apply to the flesh a tint "not too white, but just suffused with red."

To sum up our findings: We have long known that marble as well as limestone sculptures were regularly colored throughout antiquity. We have strong evidence that this coloring included the flesh of male figures from archaic times down. In the case of female figures the evidence at present available favors colored flesh in the later periods, possibly white flesh in archaic times. The use of wax as a protective coating would seem to have been a necessity for sculptures placed out-of-doors.

Believing, therefore, that in archaic Greek sculptures the flesh of male figures was regularly colored, we have added in our plate XI a pinkish tone to the flesh of the warrior and the charioteer; and in an attempt to complete the color scheme we have also added red on the helmets, spearshaft, and belt; black on the sword, spearhead, shield strap, and eyes of charioteer and warrior. The reconstruction is naturally a mere surmise of what the original scheme may have been.

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<sup>47</sup> Fellows, *An Account of Discoveries in Lycia*, plate after p. 198.

<sup>48</sup> Arvanitopoulos, 'Eφ. 1908, pp. 1 ff.; *Thessalika Mnemeia*, 1909, pp. 45 ff.; *Graptai Stelai Deme-triados-Pagason*, 1928.

<sup>49</sup> Colvin, *JHS.* iv, 1883, pp. 354 ff., pls. 36-38.

<sup>50</sup> Treu, *JdI.* iv, 1889, pl. 1.

<sup>51</sup> Cf. e.g. Helbig, *Wandgemälde Campaniens*, nos. 1, 436, 1295, 1391; Treu, *Sollen wir unsere Statuen bemalen?*, 1884, p. 23; E. Robinson, *Century Magazine*, April, 1892, p. 883.

<sup>52</sup> *NH.* xxxv, 133.

<sup>53</sup> *Eikones* 7.



## NOTES ON THE COLORS PRESERVED ON THE ARCHAIC ATTIC GRAVESTONES IN THE METROPOLITAN MUSEUM

### PLATES VII-XI

I APPEND to Miss Richter's article on "Polychromy in Greek Sculpture" the following description of the actual traces of paint preserved on the New York grave-stones. The principle followed in my water-color copies was to restore a given area from existing traces of color, however slight. Corresponding areas, for example, many twists and dots of the guilloche in plate IX, are colored even if no trace remains. In the record of colors given below, the following terms are used: "Abundant" color describes an area on which the color is preserved in a wash or in mottling so extensive as to suggest the original effect. "Traces" are small, easily discernible patches. "Faint traces" are patches readily found and identified with the magnifying glass. "Very faint traces" are particles of color which were discovered and identified only after careful scrutiny with a strong glass. Areas shown as in reserve are given a color to approximate that of the weathered surface of the stone. In the colored reproductions the registration of the lithographic plates is unfortunately not always perfect, nor do the reproductions show the modelling as I attempted to bring it out in the water-color copies.

Plate VII. Sphinx from the gravestone shown in fig. 1. Painted marble. Acc. no. 11.185. *Red* is abundant on hair, diadem, necklace, some of the alternate breast feathers and the flight feathers, the end of pisiform bone, and the border of the abacus. There are traces of red on the remainder of the alternate feathers and on the irises of the eyes. Traces of *blue* are on alternate flight feathers, except one or two, and were also found on a sufficient number of alternate breast feathers to indicate that they too were painted blue. There are traces of blue on the tuft of the tail. Abundant *black* paint outlines the flight feathers, and faint traces of black appear on the eyebrows. There are no other color traces on the areas shown in the drawing. Red has been arbitrarily added to the lips, and black to the pupils of the eyes. It is obvious that the design on the red diadem is a meander and it has been so reconstructed, but the surface is much encrusted, and the pattern, as well as any color traces that might be on it, is obscured.

Plate VIII. Panel from the gravestone of a warrior shown in fig. 2. Incised and painted marble. Acc. no. 38.11.13. *Black* is preserved in extensive mottling over the whole background and is also well preserved on the horses' hoofs and on the manes of the white pair. Faint traces are discernible on the eyes of all the horses and the hub of the chariot wheel is black. From faint traces of black found on the lappets of the warrior's cuirass, the whole garment has been restored. There are traces of black on the central part of the crest. *Red* shows in abundance on the bands above and below the scene, and also on the mane, legs, and tail of the tallest horse; on its face are very faint traces. Traces of red are found on the mane, face, chest, belly, and legs of another horse, and faint traces on its tail. There are faint traces on the chariot, chariot pole, harness and reins, and on the charioteer's goad and the war-

rior's shield, and very faint traces on the chariot wheel and on the sleeve and skirt, the crest, and the crest support of the warrior. The yoke, red in the illustration, shows no trace of color except where the reins cross it. The warrior's left foot, though properly sculptured, was painted black like the background; in the copy it has been left in reserve. Certain areas, such as the helmets, where we should expect color, have been shown in reserve for lack of evidence.

Plate ix. Part of the gravestone of a warrior shown in fig. 2. Painted marble relief. Acc. no. 38.11.13. *Red* in abundance covers the background of the relief and the face of the ledge on which the figure stands; there are abundant traces of it on one of the three strands of the right-hand guilloche border. The left border shows only two very faint traces at the bottom. Traces of *blue* occur on the greaves and on the warrior's spear and on one of the guilloche strands in the right border, and traces of *green* in several places on the third strand of this border. Though no trace remains, in the drawing blue and green have been applied to the left border in the same order as on the right. There is abundant *black* on many of the dots of both guilloche borders.

Plate x. Part of a sphinx. Painted limestone. Acc. no. 43.11.6. *Red* is abundant on the narrow raised bands outlining the breast and the wing coverts. A blob of red is preserved at the center of most of the feathers of the wing coverts. On the breast no color is preserved, except that a red spot occupies the center of each feather of the top row. On the flight feathers abundant red occurs as a heavy central stripe on the primaries. Traces of *black* are found only on the flight feathers. Black above and below the red appears on the primaries, and there are faint traces of black on the secondaries. Both are outlined in reserve.

In my drawings for figs. 4-8 of Miss Richter's text, stippling of an area indicates that traces of red occur within it, or within a closely analogous area. Black is used to denote portions in which traces of black paint are preserved, or portions where a color, now missing but presumably not red, has affected the weathering of the marble.

Fig. 4. Cavetto capital. Painted marble. Acc. no. 17.230.6. A trace of red is preserved on the left hand petal, very faint traces on the other two petals of the lotus. Of the two palmette-like ornaments, one petal has a very faint trace. There are no other remains of color on the capital. The reconstruction is based on differences in weathering, which seem to indicate, in some cases, the relative positions of red, black (?), and reserved portions.

Fig. 5. Volute capital from the gravestone shown in fig. 1. Painted marble. Acc. no. 11.185. There is abundant *red* paint on the border of the abacus and on the broad band between the volutes. Traces of red appear on the spiral threads and on one of the tongues of the lower tongue pattern. Very faint traces are on several other tongues. The necking moulding at the base shows a very faint trace, but it has been ignored in the drawing, as it is not sufficient to indicate a pattern. The eyes of the volutes, which have in fact no trace of paint, have been restored as red. Traces of *black* may be seen on the outlines of most of the tongues on the two mouldings. Faint traces are on some of the tongues on the upper moulding. There are no further traces of paint on the face of the capital. The remainder of the design

appears on the surface in two grades of discoloration, the disappearance of the black (?) paint having left lines and areas lighter than the adjacent surface.

Fig. 6. Palmette finial of a gravestone, reconstructed from three fragments. Painted marble. Acc. no. 21.88.179. *Red* is abundant wherever indicated on preserved portions in the drawing. *Black* is abundant on most of the alternate zigzags, on most of the outline of the inverted palmette, and on two of its petals, with traces on two other petals. There are very faint traces of black on the outline and two petals of the upper palmette, as preserved.

Fig. 7. Gravestone of Antigones. Painted marble. Acc. no. 15.167. *Red* is abundant on the background of the shaft and on alternate petals of the palmette. Traces of *black* are on the remaining petals and on their outlines. Disappearance of paint used for the drawing of the figure has left lines which are lighter than the adjacent surface and in places slightly raised above it.

Fig. 8. Fragment of a gravestone. Painted marble. Acc. no. 15.167.1. *Red* is abundant on the background. The outlines of the feet are preserved in the same way as those in fig. 7.

Figs. 9, 10. Part of a sphinx. Painted limestone. Acc. no. 26.13. The illustrations are from photographs of water-color drawings. *White* is abundant on ears, cheek, neck, leg, belly, as well as on the raised bands outlining colored areas. *Black* is abundant on the hair, and traces of it are on the left, or rear, wing. *Red* is abundant on the breast, the left wing covert, and one feather of the right wing; faint traces of it are on three other feathers. *Blue* paint, traces of which remain on the right wing covert, has turned in places to green, and has left a yellowish stain over most of the area. From a similar stain on one wing feather, it and two other feathers are assumed to have been blue.

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## AQUA TRAIANA

WHEN, about ten years ago, the two outstanding monographs on the aqueducts of ancient Rome were published,<sup>1</sup> only two ancient records referring to the Aqua Traiana were known, one of them a *cippus* of the aqueduct which was found *in situ* in 1830, apparently at La Storta, about ten miles from Rome on the road to Bracciano. The inscription, now preserved in the Lateran Museum, reads as follows:<sup>2</sup> [imp.] Caesa[r] / [divi] Nervae f. N[erva] / [T]raianus A[ug.] / Germ(anicus) Dac(icus) / [po]nt(ife)x max(imus) tr(ibunicia) pot(estate) XIII / imp. VI cos. V p(ater) p(atriciae) / aquam Traianam / pecunia sua / in urbem perduxit / emptis locis / per latitud(inem) p(edum) xxx. This gives us the date of construction of the aqueduct as 109 A.D. For this reason the Aqua Traiana is not mentioned in Frontinus' treatise *De aquis* written at a somewhat earlier date (though after 97 A.D.). The Emperor bought a strip of ground 15 ft. wide on either side of the new aqueduct, in agreement with the *Senatus Consultum* of 11 B.C., which Frontinus not only preserved, but in all probability actually had saved from oblivion.<sup>3</sup> In fact, the *cippus* of the Aqua Traiana shows how the Emperor and the unknown *curator aquarum* in office in 109 heeded the advice given by Frontinus in his admirable treatise in the spirit of faithful public service so characteristic of the new administration.

The other evidence is a coin issued in the same year 109 A.D. and repeated in the years 112-114 A.D.<sup>4</sup> Its reverse bears the personification of the aqueduct as a river god, reclining beneath a vault which perhaps indicates the monumental fountain of the aqueduct. The figure holds a reed in his right hand, and leans his left arm on an urn from which water flows. The coin is inscribed on the obverse: *Imp. Caes. Nervae Traiano Aug(usto) Ger(manico) Dac(ico) p(ontifici) m(aximo) tr(ibunicia) p(otestate) cos. V p(atri) p(atriciae)*; on the reverse: *s(enatus) p(opulus)q(ue) R(omanus) Optimo Principi s(enatus) c(onsulto) and Aqua Traiana* (fig. 1). By this coin the senate rendered Trajan official thanks for the construction of the aqueduct.



FIG. 1. — REPRESENTATION OF THE AQUA TRAIANA ON A COIN OF 109 A.D.

<sup>1</sup> Th. Ashby, *The Aqueducts of Ancient Rome*, edited by I. A. Richmond, Oxford, 1935 (on the Aqua Traiana: pp. 299-307), and E. B. Van Deman, *The Building of the Roman Aqueducts*, Washington, D. C., 1934 (on the Aqua Traiana: pp. 331-340, 16-17). In using Ashby's great work, it should be borne in mind that it was finished in the spring of 1931. The untimely death of Dr. Ashby delayed publication until 1935. No small indebtedness is owed to Dr. Richmond for the spirit of true *pietas* in which he prepared the manuscript and saw it through the press.

<sup>2</sup> *CIL*, vi, 31567 = *ILS*, 290; cf. Ashby, *op. cit.*, p. 299, n. 2.

<sup>3</sup> *De aquis*, 127; the decisive passage in the *Senatus Consultum* runs as follows: . . . *placere circa fontes et fornices et muros utraque ex parte quinos denos pedes patere* . . .

<sup>4</sup> Ashby, *op. cit.*, p. 299; P. L. Strack, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts* i, 1931, p. 192, pl. vii, 417 (= fig. 1).

It is not intended to resume here the question of the course of the Aqua Traiana,<sup>5</sup> which drew its water from the region of the lake of Bracciano and which in the beginning of the seventeenth century was largely concealed through the construction of the Acqua Paola by Pope Paul V Borghese. The Acqua Paola is well known to the visitors of Rome because of its great fountain on the Gianicolo near Porta San Pancrazio and it still supplies part of the Vatican, the Vatican gardens, the Borgo and the Lungara.<sup>6</sup> Although it must remain doubtful whether the springs which feed the Acqua Paola were used also by the Aqua Traiana, the great importance of the ancient aqueduct cannot be questioned. A section of it was found in 1912-13 below the American Academy and it is now accessible from the basement, for a distance of 26 m.<sup>7</sup> About 30 m. farther east, the channel came to the surface and made its way to the casino of the Villa Spada, which allegedly was built on the remains of the monumental fountain, the terminus of the aqueduct.

Modern scholars are unanimous in assuming that the Aqua Traiana was designed for the district across the Tiber, the *regio Transtiberina*.<sup>8</sup> That this was its primary purpose is suggested by Frontinus' discussion of the unfavorable water situation in Trastevere. He criticizes Augustus for having introduced the Aqua Alsietina, which was not wholesome and was therefore nowhere delivered for popular consumption. "Possibly on building the Naumachia he brought this water in a special conduit to avoid robbing the more wholesome supplies; and then granted the water which came to be left over from the Naumachia for adjacent gardens and private irrigation. Yet it is customary in Trastevere, when the bridges are under repair and the water supply from across the river is cut off, to draw from the Alsietina as may be needed to help out the public fountains."<sup>9</sup> Again it may be argued that this description of conditions in Trastevere was not without influence on Trajan's decision to build the new aqueduct.

Under these circumstances, it is surprising that when two new documents bearing on the Aqua Traiana were discovered recently in rapid succession, they remained unobserved, even though they were bound to bring about a revision of our views on the Traiana. In 1932 G. Calza published a fragment of the *Fasti Ostienses* which deals with events of the years 108-113 A.D.<sup>10</sup> It is well known that these *Fasti* are

<sup>5</sup> On the Aqua Traiana, besides the works referred to in n. 1, cf. R. Lanciani, *I comentarii di Frontino*, Rome, 1880, pp. 162-168; R. Paribeni, *Optimus Princeps* ii, Messina, 1927, pp. 37-40; S. B. Platner and Th. Ashby, *A Topographical Dictionary of Ancient Rome*, London, 1929, p. 28; G. Lugli, *I monumenti antichi di Roma* ii, Rome, 1934, pp. 395-399.

<sup>6</sup> Ashby, *op. cit.*, p. 306.

<sup>7</sup> Van Buren, *MAAR*, i, 1917, pp. 59-61; Ashby, *op. cit.*, p. 305; Van Deman, *op. cit.*, p. 332.

<sup>8</sup> Ashby, *op. cit.*, p. 14; Van Deman, *op. cit.*, pp. 17, 331 ("a new aqueduct for the dwellers in the region across the Tiber"); Paribeni, *op. cit.*, p. 37; Lugli, *op. cit.*, p. 395.

<sup>9</sup> *De aquis* 11 (I reproduce Ashby's translation, *op. cit.*, p. 183). The passage indicates that repairs on certain Tiber bridges involved a suspension of the water supply of Trastevere; this can only mean that the water was carried across the Tiber on these bridges, in pipes or in aqueducts connected with the bridges. In fact, Frontinus, *De aquis* 20, expressly says that the *arcus Neroniani*, a branch of the Aqua Claudia, delivered a part of its water across the Tiber to Trastevere: *modum quem acceperunt* (scil. *arcus Neroniani*) *aut circa ipsum montem* (scil. *Caelium*) *aut in Palatium Aventinumque et regionem Transtiberinam dimittunt* (see also Platner-Ashby, *op. cit.*, pp. 23, 211; Van Deman, *op. cit.*, p. 267; Lugli, *op. cit.*, p. 303).

<sup>10</sup> NS. 1932, pp. 188-205. A new edition of all the fragments of the *Fasti Ostienses*, including those found in the recent excavations at Ostia, has been prepared by Attilio Degraffi for the *Inscriptiones*

excerpts from the *Acta Urbis*, a source of highly official character, and that their trustworthiness is almost unique.<sup>11</sup> This is particularly true in matters concerning the dedication of buildings, which naturally were registered with meticulous care in the official gazette. The report of events in the year 109 A.D. starts as follows:<sup>12</sup> *x k(alendas) Iul(ias) imp. Nerva Traianus Caes. Aug. Germ(anicus) / Dacicus thermas suas dedicavit et publicavit. / VIII k(alendas) Iul(ias) aquam suo nomine tota urbe / salientem dedicavit*. While, as we have seen, the year of the dedication was already known, the new text furnishes us with two additional facts: (1) first of all the closeness of the two dates of dedication, for the aqueduct was inaugurated only two days after the baths of Trajan had been opened to the public. How intimately connected with each other the two notices are is shown by the fact that the redactor of the *Fasti Ostienses* in this case refrained from his usual practice of starting his description of every act of the Emperor with the Emperor's name. The dedication of the aqueduct appears thus as a kind of sequel to the inauguration of the baths. (2) If this information was apt to puzzle the topographers of ancient Rome, the words "*tota urbe salientem*" should have startled them even more, because they clearly and definitely upset the generally accepted view on the function of the Aqua Traiana. But no one of the scholars who have treated the inscription has so much as taken notice of this necessary consequence.<sup>13</sup> To avoid any misunderstanding in the interpretation of the quoted passage it may be remarked that the word *salire* = "flow," "issue," occurs frequently in Frontinus, mostly in the connection *publici salientes* = "public fountains" (11, 103, 104, 129): but cf. also 87: *Atque etiam omni parte urbis lacus tam novi quam veteres plerique binos salientes diversarum aquarum acceperunt* ("In all parts of the City, also, the basins, new and old alike, have for the most part been connected with two different aqueducts each . . .") and 97: . . . *ubi publice saliet* (scil. *aqua*); . . . *quorum arbitratu aqua in publico saliret* ("where the waters issue publicly"; . . . (men) in whose care the public fountains should be placed"). The passage in 87 offers an additional analogy in "*omni parte urbis*." The meaning of the words in the *Fasti Ostienses* is therefore: "On June 24 he dedicated the aqueduct which is named after him and has outlets throughout the whole city." If it has been proved, then, that the Aqua Traiana was not limited to Trastevere, the further conclusion presents itself that the new conduit had something to do with the baths of Trajan. According to what we have already seen, this would hardly have been a daring hypothesis, but that it would have been right, was demonstrated only four years after the publication of the fragment of the *Fasti Ostienses*.

In 1935 the Parco Brancaccio in which most of the ruins of the baths of Trajan are situated was acquired by the State and converted into a park which was opened to

*Italiae* xiii, *Fasti et Elogia*, fasc. I-II, a work to whose publication we are looking forward with great expectations.

<sup>11</sup> Calza, NS. 1932, p. 203; A. Stein, "Die römische Staatszeitung und die *Fasti Ostienses*", *Hist. Zeitschr.* cxlix, 1934, pp. 294-298.

<sup>12</sup> Calza, NS. 1932, p. 194.

<sup>13</sup> Calza, *loc. cit.*; Ch. Hülsen, *RhM.* lxxii, 1933, p. 370; J. Carcopino, *Comptes Rendus de l'Ac. des Inscr.* 1932, p. 378, gives the correct translation of the passage: "*dédicace de l'aqueduc de Trajan qui amena dans la ville entière les eaux du bassin de Bracciano*." In the literature about the aqueducts the inscription has not been used at all. I wish to emphasize, however, that Ashby died before it was discovered.



FIG. 2.—LEAD PIPE DISCOVERED BENEATH THE BATHS OF TRAJAN (ANTIQUARIUM COMUNALE, ROME)

the public in the spring of 1936. In the same year Antonio Muñoz gave a short account of the work in an illustrated booklet entitled *Il Parco di Traiano*. There he mentioned<sup>14</sup> the discovery, not far from the *Via delle Terme di Tito*, of an inscribed lead pipe 18 m. long, of which he also published the two pictures reproduced here (figs. 2 and 3). In 1939 A. M. Colini gave a few more details about this pipe in the *Notiziario* of the *Bull-Com.* lxvi, 1938, pp. 244–245:<sup>15</sup> “The second discovery was that of a long tract of the great lead pipe which brought the water to the baths. It was found beneath a pavement imbedded in a mass of cement (*calcestruzzo*) which had a cross section of .60 m. square. On each of the eight sections (of which the six more complete ones are now on exhibition in the Antiquarium Comunale), there occur, besides three different marks of numbers, the following inscriptions:

(a) *Therm(ae) Traian(i).*

(b) *Imp. Caes. Nerv(ae) Traiani Aug(usti) Germ(anici) Dacici / sub cur(a) Hesychi*

*Aug(usti) l(iberti) proc(uratoris), Themistus ser(vus) Alexandr(ianus) fec(it).<sup>16</sup>*

(c) *Aq(ua) Tr(aiana).*”

In fig. 3 the stamp c AQTR is visible twice.

The problem of the water supply of the baths of Trajan has thus found a clear solution, although it is more than probable that the Emperor did not depend on the Aqua Traiana alone—in accordance with his sound principle, expressed by Frontinus, of having for



FIG. 3.—INSCRIPTIONS ON THE LEAD PIPE IN FIG. 2

<sup>14</sup> *Il Parco di Traiano*, Rome, 1936, p. 13.

<sup>15</sup> I wish to thank Dr. Marion E. Blake for giving me an opportunity to study an extract of this article. I saw the pipes in 1938 in the Antiquarium Comunale.

<sup>16</sup> The name of the *curator* Hesychus occurs also in the pipe-inscriptions *CIL.* xv, 2, 7296 and (probably) 7297.

every *lacus* two sources, one of which could always function as a reserve whenever the other was out of commission for repairs or other reasons.<sup>17</sup>

It appears, then, that the Aqua Traiana fulfilled at least two main purposes: to improve decidedly the inefficient water system of the *regio Transtiberina*, and to furnish the new baths, the grandiose creation of Apollodorus of Damascus, with adequate water. By recurring to springs situated in the region of the Sabatine Hills, Trajan made accessible to the city's water supply a source which had never before been used, and as in other instances his engineers and architects showed an originality which demands respect. Accordingly, the Senate was justified in celebrating the construction of the Aqua Traiana, which was not, as has been hitherto supposed, a conduit of only local significance, but which proves to have equalled in importance most of the nine earlier aqueducts of ancient Rome.

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<sup>17</sup> *De aquis* 87. Whether the Aqua Iulia partially supplied the baths of Trajan with water, as Lanciani, *op. cit.*, p. 215, maintains (cf. Paribeni, *op. cit.*, p. 48), cannot be decided. Ashby wisely refrained from discussing the whole question of the water supply of the baths of Trajan, which at the time when he wrote his book could not be solved.



## DEVELOPMENT OF THE "MEGARON" IN PREHISTORIC GREECE\*

A NUMBER of house-types co-existed in prehistoric Greece introduced by various waves of immigrants from the earliest times onward. We select for this paper that type which can be spoken of as the most characteristic one, chiefly because it was used for the Greek temple in the later classical period. A great number of variants was developed in the course of three millenniums which shed interesting light on the history of Greek civilization. Some of these variants are commonly lumped together under the term "megaron" which is widely used in archaeological literature. Our goal is to establish an exact classification for them.

The general type is the "long room," that is, a room with four walls having two different lengths and thus differing from the square room which has all four walls of the same length; the decisive feature of the long room is the position of the entrance, which is in one of the shorter walls, so that the "depth" of the room is greater than its "width." We shall not attempt in this paper to find out the origin of the type, its original center and its distribution outside the Aegean area. We may only mention that the earliest examples found up to date come from Russia and date from Upper Palaeolithic times, that the type occurs in Mesopotamia earlier than in the Aegean or Central Europe and that on account of these facts the original center is likely to be sought for in European Russia or the adjacent parts of Asia.<sup>1</sup>

The simplest and, therefore, the original type (type 1), namely an isolated rectangle, is attested for Thrace by hut models from Kodjadermen and Salmanov, for Macedonia by foundations at Sérvia and perhaps for Thessaly, if remnants in Sesklo allow this interpretation.<sup>2</sup> These finds are neolithic and datable to the first half of the third millennium, except the Thracian ones which might be slightly later.<sup>3</sup> The Thracian and Thessalian examples have pitched roofs. We must, however, refrain in the following discussion from considering the type of the roof, in spite of its importance. It is certain that a number of types were used: the pitched roof, the flat roof and perhaps the barrel roof,<sup>4</sup> but it is impossible for us to find out the special type in the individual case, because the roof has always been destroyed and its type is a matter of speculation. The hut urn from Kodjadermen has circular windows in the walls, a very unusual feature. One of the houses at Sérvia shows a

\* This article was written before the papers by Smith and Dinsmoor appeared in *AJA*, xlv, 1942, pp. 99 ff. and 370 ff. Its publication has been delayed by unforeseen circumstances.

<sup>1</sup> Cf. the author's article, "Types of Mesopotamian Houses," *JAOS*, lx, 1940, p. 167 f. and F. Oelmann, *Haus und Hof im Altertum*, Berlin, 1927, pp. 41 ff.

<sup>2</sup> *AM*, xlii, 1917, p. 140; *AA*, 1913, p. 345; F. Behn, *Hausurnen*, Berlin, 1924, p. 62 f.; W. A. Heurtley, *Prehistoric Macedonia*, Cambridge, 1939, pp. 47 ff.; Ch. Tsuntas, *The Prehistoric Akropoleis of Dimini and Sesklo*, Athens, 1908, p. 82; G. Mylonas, *The Neolithic Period in Greece*, Athens, 1928, p. 18 f. A catalogue and description of all Greek houses has been published by D. M. Robinson in *RE*, Suppl. vii, pp. 223 ff.; cf. also Th. A. Busink, *Prothuron*, Batavia, 1936, pp. 13 ff.

<sup>3</sup> Cf. the latest discussion of the dating by C. Hawkes, *The Prehistoric Foundations of Europe*, London, 1940, pp. 107 ff.

<sup>4</sup> Holland, *AJA*, xxiv, 1920, pp. 323 ff.; *Mesop. Houses*, p. 168.

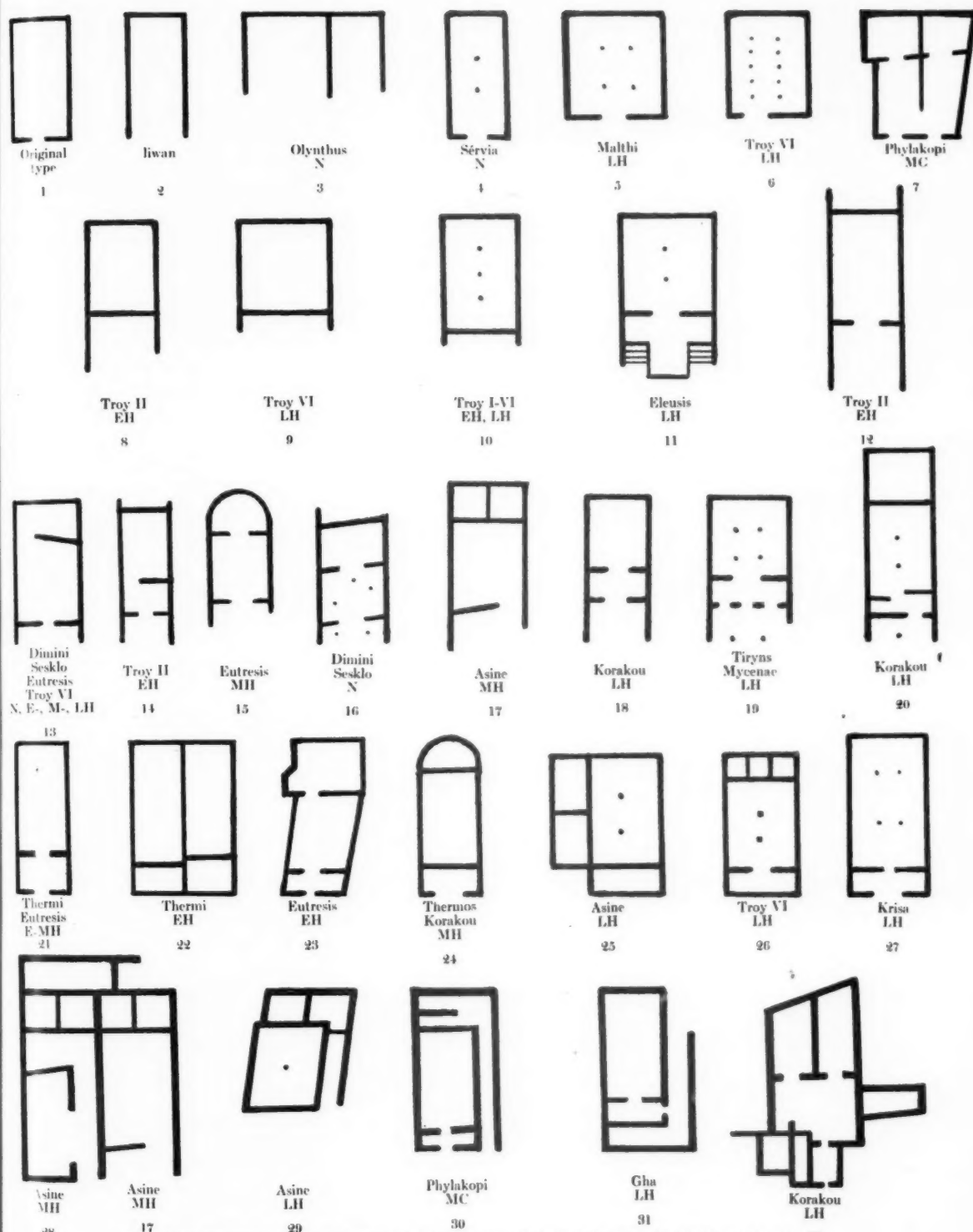


Table giving provenance and date of types. N = Neolithic, EH = Early Helladic, MH = Middle Helladic, LH = Late Helladic.

The drawings have been slightly regularised and are not exactly in scale.

FIG. 1. — TYPES OF MEGARA WITH DATES

variant (type 4), namely two posts in the interior placed longitudinally to support the ceiling; we thus see improvement in technique and the addition of parts. The opposite process, namely the losing of a part, seems to have taken place at Olynthus in neolithic times, although the interpretation of the remnants is not certain (type 3).<sup>5</sup> We see two rooms side by side, having a common long wall and no short walls at one side. Since this "open type," or liwan (type 2), is well known in the Orient,<sup>6</sup> we might be justified in assuming its existence also here. The duplicating of the liwan is likewise found in the Orient and is due to the "agglomerative type" which is native to highlands from Anatolia to Persia.<sup>7</sup> A later example of the simple liwan was found at Malthi in Messenia.<sup>8</sup> The houses of Troy I and II, dating from the third millennium, show the addition of another part, namely of a porch.<sup>9</sup> Other features produce a number of variants. Type 8 has a front porch only; type 12 has projecting walls forming a shallow porch also at the back; type 10 has a front porch and longitudinal posts; type 14 has a partition wall dividing the interior into two rooms. A row of houses excavated incompletely by Schliemann have common walls and thus show the agglomerative type, whereas the other examples from Troy preserve the original isolation.<sup>10</sup> The short ends of the houses are not preserved, so that we cannot say whether they had porches or closed anterooms. The latter case occurs at Thermi on Lesbos, where the associate type is the rule (type 22).<sup>11</sup> Houses in Sesklo, Dimini and Eutresis are close to type 14;<sup>12</sup> they have the porch and subdivision (type 13); another house at Eutresis has an anteroom instead of the porch and a large room at the back which is wider than the front room and juts out; it clearly originated not by subdivision, but by addition, presumably under the influence of the agglomeration principle (type 23). One of the houses at Sesklo has two small rooms added at the back which do not communicate with the chief rooms as in the example at Eutresis; it has, furthermore, interior posts, but in transverse, not in longitudinal arrangement. Such doubled or symmetrical posts occur also at Dimini (type 16).

These houses of the third millennium, the neolithic and Early Helladic periods, represent the initial stage of development. Typification has not yet taken place, but variety and experimentation are found. This fact is well borne out by a comparison of the houses with porch and subdivision (types 8, 12, 13, 14) coming from Troy and Greece; all are very similar, yet no two are identical; especially the sizes of the different parts vary. Furthermore, whereas the houses of Troy are well and regularly built, those from Greece are sloppy: the walls are often not parallel nor the angles right ones; the doors need not be in the center; one example from Dimini has a curved wall at the back, because it is built against the curved fortification wall. A number of additions were made to the simple original type during the

<sup>5</sup> G. Mylonas, *Excavations at Olynthus I*, Baltimore, 1929, pp. 10 f. The author interprets the house differently.

<sup>6</sup> *Mesop. Houses*, pp. 162, 168.

<sup>7</sup> *Ibid.*, p. 169.

<sup>8</sup> N. Valmin, *The Swedish Messenia Expedition*, Lund, 1938, p. 175.

<sup>9</sup> W. Dörpfeld, *Troja und Ilion I*, Athens, 1902, p. 81; Blegen, *AJA.* xli, 1937, p. 17 f.

<sup>10</sup> Dörpfeld, *op. cit.*, p. 43.

<sup>11</sup> W. Lamb, *Excavations at Thermi in Lesbos*, Cambridge, 1936, p. 49 and plans.

<sup>12</sup> Tsuntas, *op. cit.*, pp. 59 f., 88 ff.; H. Goldman, *Excavations at Eutresis in Boeotia*, Cambridge, Mass., 1931, pp. 17, 21.



course of the development, namely a porch or an anteroom, interior posts and a partition. This development seems to be purely internal; a partition is such a simple device that the assumption of an influence of the co-existing agglomeration type seems unnecessary. Such influence is certain, on the other hand, in the types 3, 22 and 23 showing "association."

In the following period, the Middle Helladic, the earlier types continue. We thus find at Eutresis houses with a porch or an anteroom and a subdivision (types 13 and 21).<sup>13</sup> Beside these survivals, a number of new types appear which are due to the influence of different types. One type, of which good examples come from Eutresis, Korakou and Thermos, has the back wall curved.<sup>14</sup> The front is either an open porch (type 15), or a closed anteroom (type 24); the rooms are often well balanced, the long central room being flanked by the smaller rooms at the ends. The type doubtlessly originated in a fusion of the "long type" with the curvilinear type which was widespread in Greece at that time.<sup>15</sup> Association on a larger scale than in the preceding period is attested at Asine in the Argolis (types 17 and 28).<sup>16</sup> The block contains no less than ten rooms. On the right can clearly be discerned type 8, consisting of a porch and chief room, with two smaller rooms added at the back; on the left are two corresponding small rooms and in front a complicated arrangement which can be understood best as a long room split by the insertion of a corridor from which the remaining chief room is now accessible instead of from the front; two more rooms are added at the back of these two units. The differences from the normal types, namely association, two small rooms at the back instead of a single room (type 13) and a corridor can be explained only by the assumption of strong influence of the agglomeration type, in which all these features are found.<sup>17</sup> We find other examples of the corridor type, although with a slightly different arrangement, in house B at Asine and in a house at Krisa. House B has associated a long room with two anterooms and side rooms.<sup>18</sup> A different type with a corridor was developed in Phylakopi on Melos.<sup>19</sup> The long room with an anteroom was incorporated into the agglomeration type, but kept intact so that the corridor runs by its side (type 30). The other houses are of the agglomeration type; two have two parallel long rooms (type 7), whereas the rooms of the other houses are of different shape.<sup>20</sup> Since the long room is attested for Phylakopi by the house of type 30, we can conclude that the long rooms of the two other houses originated under its influence (type 7). They are, however, incorporated in, and thus absorbed by, the original agglomer-

<sup>13</sup> Goldman, *op. cit.*, pp. 37, 52, 57.

<sup>14</sup> Goldman, *op. cit.*, p. 35; C. Blegen, *Korakou*, Boston, 1921, p. 72; Rhomaïos, *Δελτ.* i, 1915, pp. 225 ff. Houses at Asine, A. Westholm, *Asine*, Stockholm, 1938, pp. 93, 101; Eutresis (Goldman, *op. cit.*, p. 13) and Malthi (Valmin, *op. cit.*, p. 409, A45, D 58) and similar ones elsewhere do not have long rooms and are therefore, of a different type. This is also true of the houses at Rachmani (A. Wace and M. Thompson, *Prehistoric Thessaly*, Cambridge, 1912, p. 38).

<sup>15</sup> Cf. N. Valmin, *Das adriatische Gebiet in Vor- und Frühbronzezeit*, Lund, 1939, pp. 148 ff.

<sup>16</sup> Westholm, *op. cit.*, p. 71: house D.

<sup>17</sup> *AM.* xlii, 1917, pp. 131 ff.; *Mesop. Houses*, p. 168; Mallowan, *Iraq* iv, 1937, pp. 109 ff.

<sup>18</sup> Westholm, *op. cit.*, p. 69 (house B); Jannoray, *BCH.* lxi, 1937, p. 304.

<sup>19</sup> T. D. Atkinson, *Excavations at Phylakopi*, London, 1904, p. 44, fig. 32.

<sup>20</sup> *Op. cit.*, long rooms: p. 41, fig. 27; p. 43, fig. 31; original agglomeration type: p. 36, fig. 22; p. 38, fig. 24; p. 40, fig. 26.

ation type. A long room with a corridor on one side and rooms at the other side and at the back and, therefore, close to types 28 and 30, was found at Malthi.<sup>21</sup> The second period thus shows the survival of earlier types, but a greater rôle is played by new types which originate out of the amalgamation of these earlier types with other types existing in Greece. It is a period of syncretism.

The Late Helladic period is characterised by the great number of houses and by the great variety of their types. The "amalgamated" types continue. A house consisting of two associated long rooms with added side rooms comes from Asine (type 25).<sup>22</sup> Another house at the same place has the corridor like type 30, but otherwise resembles the house showing types 17 and 28.<sup>23</sup> A house at Korakou (type 32) has a number of annexes placed irregularly, doubtless under the influence of the agglomeration type, as the latter produced type 25 in a similar manner.<sup>24</sup> There are a number of examples in which the long room with an anteroom is incorporated into the agglomeration type. In some cases, namely at Gha in Boeotia and at Tiryns, the entrance to the anteroom is not from the front, but shifted to one of the sides, so that the character of the type is obscured (type 31).<sup>25</sup> In other cases, namely at Gournia and at Phylakopi, the entrance is from the front and a corridor runs parallel as in type 30.<sup>26</sup> The palace at Mycenae is too much destroyed to define the type exactly, but we can say that the long room is preserved, although it is incorporated.<sup>27</sup> Isolation, however, persists by the side of incorporation. It is best exemplified by the houses of Troy VI.<sup>28</sup> The arrangement at Tiryns is most illuminating: the two chief "megara" are surrounded by other rooms, but they are separated from them by means of open passages around them.<sup>29</sup> It is evident that this isolation is intentional; we must see in it the tendency to emancipate the type from the incorporation which had destroyed the traditional isolation in a number of cases; it means the reaction against foreign influence. The chief "megaron" is not only the largest building and in the very center, but also dominates by its greater height; this layout has been correctly called monarchical.<sup>30</sup>

So much about the arrangement; as to shape, the traditional type, which is rather long and narrow, is found in a number of cases, for instance at Korakou (types 18 and 20).<sup>31</sup> The general tendency, on the other hand, was to give the room a more airy and spacious appearance by increasing the width. This might be an internal development due to the fact that the higher civilization of the period demanded a more stately type. Influence of the less lengthy Minoan type of room is, however, well possible, since such an influence is certain in other features to be mentioned later. Great variety is made possible by different internal arrangements, namely by the number of subdivisions and of posts. There might be a single room without porch or anteroom (types 5 and 6).<sup>32</sup> Then the closed anteroom is found (types 26 and

<sup>21</sup> Valmin, *op. cit.*, p. 409, pla. 111 (house A 1-8).

<sup>22</sup> Westholm, *op. cit.*, 75 (house G).

<sup>23</sup> *Ibid.*, p. 79 (house K).

<sup>24</sup> Blegen, *Korakou*, p. 84.

<sup>25</sup> BCH. xviii, 1894, plan xi; K. Müller, *Tiryns* iii, Augsburg, 1930, pl. 1 (rooms XXI and XXII); cf. Pfuhl in *Festgabe für Hugo Blümner*, Zürich, 1914, pp. 193 ff.

<sup>26</sup> Oelmann, *JdI.* xxvii, 1912, p. 43; Atkinson, *op. cit.*, p. 56.

<sup>27</sup> A. Wace, *BSA.* 25, 1921-23, pl. 11.

<sup>28</sup> Blegen, *AJA.* xli, 1937, pl. xix.

<sup>29</sup> K. Müller, *op. cit.*, rooms v, vi, vii and xvii, xviii, pl. 1, p. 42 f.

<sup>30</sup> Pfuhl, *op. cit.*, p. 197.

<sup>31</sup> Blegen, *op. cit.*, pp. 81, 94.

<sup>32</sup> Valmin, *op. cit.*, pl. iv (room B 65); Blegen, *AJA.* xli, 1937, pl. xix; Basilica.

27)<sup>33</sup> or a porch (types 9, 19 and 20).<sup>34</sup> Partition walls might create a second anteroom or vestibule behind the porch (types 18 and 20) or a back room (type 20); the balance of the types with a back room is much better than in the first period (type 16), because the preceding room is much larger so that the anteroom and back room are subordinated to it, an accomplishment of the second period, as we saw. Instead of the normal single back room, two or even three occur occasionally (types 26 and 29), due to survival of an earlier type (17), and in type 26 due to new influence of the tripartite liwan of the East.<sup>35</sup> Two special features must be mentioned. The chief "megaron" at Tiryns has the walls of the vestibule pierced by three openings, clearly under Cretan influence, where such pillared walls are a characteristic feature (type 19).<sup>36</sup> The building at Eleusis (type 11)<sup>37</sup> is placed on a podium, into which two staircases are cut, leaving a platform between them. There must be a special reason, because a single staircase is equally possible on technical grounds. We surmise that the reason is a ritual one, namely that the priest came out of the interior and performed rites on the platform in front of the assembled crowd below. Analogies suggest the influence of an "East-Mediterranean" type.<sup>38</sup>

In regard to posts, we find the following variations; no posts at all (types 9, 30, and 31); a single post in the center (type 29); a central row of posts (types 25 and 26); two rows of posts (their number can vary): five posts in a row characterize type 6; two posts in each row, so that the room has four posts, occur in a number of rooms which are the most prominent ones of the dwellings, for instance the largest "megara" at Tiryns and Mycenae. We thus deal with a special type which was developed for the purpose of representation and which we may call the palace type (types 5, 19 and 27). Two more minor features must be mentioned. In the "megaron" at Tiryns the throne, that is the most important place, is not at the back wall but at the right side wall. Since the symmetrical layout of the type would demand the use of the place at the back wall, as the later Greek temple actually does, the shifting to one of the long sides must be due to foreign influence. It is evident that this influence came from Crete, where we find such arrangement.<sup>39</sup> Other Cretan elements in the same building are the pillared wall discussed above and the painted decoration of floors and walls. The second feature is a second story, in case its assumption, which is probable for the "Basilica" at Troy VI, but highly conjectural

<sup>33</sup> Blegen, *AJA.* xli, 1937, pl. xix: Pillar House; Jannoray, *BCH.* lxi, 1937, p. 316; Westholm, *op. cit.*, p. 75.

<sup>34</sup> K. Müller, *op. cit.*, pl. I: v, vi, vii and xvii, xviii; Blegen, *AJA.* xli, 1937, pl. xix: vi A, and B; Blegen, *Korakou*, pp. 81, 92, 94.

<sup>35</sup> Westholm, *op. cit.*, p. 79; Blegen, *AJA.* xliii, 1939, p. 216; the rooms were open originally. *Mesop. Houses*, p. 169; Oelmann, *Bonn. Jb.* 127, 1922, pp. 217 ff.

<sup>36</sup> F. Noack, *Ovalhaus und Palast in Kreta*, Leipzig, 1908, pp. 22 f.

<sup>37</sup> Mylonas, *AJA.* xxxvii, 1933, p. 274, pl. xxxiv; Kuruniotis, *Guide to Eleusis*, Athens, 1934 and *ARW.* xxxii, 1935, p. 56 f., pl. 1.

<sup>38</sup> Platform in Djoser's tomb at Saqqara for the celebration of the Heb-Sed festival: C. Firth and J. E. Quibell, *The Step Pyramid*, Le Caire, 1935, pls. 63, 67. The Minoan shrines must be understood as having the central part raised, to which staircases must be assumed in the siderooms: Evans, *PM.* ii, London, 1928, p. 807. Cf. *AM.* xlii, 1917, p. 151. Assyrian temple: G. Loud, *Khorsabad* i, Chicago, 1936, p. 122, figs. 98 and 125. Temple of Apollo at Didyma: *AM.* xlii, 1917, p. 152. Temple at Paestum: D. S. Robertson, *Handbook of Greek and Roman Architecture*, Cambridge, 1929, p. 202.

<sup>39</sup> Evans, *op. cit.*, iv, London 1935, fig. 877.

for the "megaron" of Mycenae, is justified.<sup>40</sup> The influence comes from Crete and more specifically from the agglomeration type once more.<sup>41</sup>

We thus find in this third period what we can expect, namely the continuation of earlier types and the development of statelier and richer types keeping step with the growth of civilization; the latter was chiefly due to Minoan influence which we discern also in architecture: the palace type (type 19). On the other hand, the great rôle which the isolated long room, the "megaron," now plays does not seem to be in line with the development which brought about its submergence in the second period. We must take it as a reaction. The "Mycenaeans" must have found this type particularly appealing to their taste, and may even have taken it as their peculiar ancestral type which they wished to preserve and to use. It thus became the specifically Greek type, as it was also in classical times. We may use the long room in certain cases to distinguish Greek influence and colonization, for instance at Phylakopi and Gournia; it may not even be excluded that some long houses of the late Early Helladic period are due to early swarms coming into Greece.<sup>42</sup> But the long house cannot be used generally as a criterion. No scholar assumes that Greeks were in Troy I or even VI and their early presence in Thessaly (types 13 and 16) is most unlikely. It is interesting that in the Middle Helladic period, in the beginning of which most scholars now date the coming of the "Greeks," the amalgamated types play such a great rôle.<sup>43</sup> It would be absolutely wrong to say that a man living in an "isolated" type was of purer "Greek" extraction than another living in an "amalgamated" type. Our conclusions thus are: the "Greek speaking" tribes, as we had best call them, may have used a simple long house type originally, but they shared it with many other tribes; they considered it, however, in the end as their specific national type. The history of the type shows that a number of ethnic groups participated in its development in Greece: to a small degree a group or groups which used curvilinear rooms, either mesolithic tribes or early immigrants from the Near East or both;<sup>44</sup> to a much greater degree, such Near Easterners bringing with them the agglomeration type; all these groups contributed to the formation of the later "Classical Greeks."

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<sup>40</sup> Caskey, *AJA*, xl, 1936, p. 122. Wace and Holland, *BSA*, xxv, 1921-23, pp. 201, 256, 276. A second story is also possible in a building at Korakou: Blegen, *op. cit.*, p. 85.

<sup>41</sup> A. Müfid, *Stockwerkbau der Griechen und Römer*, Berlin, 1932, pp. 11 ff.; L. Woolley, *AJ*, xix, 1939, pl. iv. C. Watzinger, *Denkmaeler Palaestinas* i, Leipzig, 1933, fig. 66. The earliest example of a multi-storied house is found on a Mesopotamian seal of the Jemdat Nasr period: E. Douglas van Buren, *The Fauna of Ancient Mesopotamia*, Rome, 1939, fig. 23.

<sup>42</sup> Cf. S. Fuchs, *Die griechischen Fundgruppen der fruehen Bronzezeit*, Berlin, 1937, pp. 95 ff.; Hawkes, *op. cit.*, p. 238.

<sup>43</sup> A. Wace and C. Blegen, *Klio* xxxii, 1939, p. 139 f.; Hawkes, *op. cit.*, p. 240; different opinions have been expressed by Schweitzer, *Gnomon*, iv, 1928, p. 611 f. and Valmin, *op. cit.*, p. 403 f.; cf. Fuchs, *op. cit.*, p. 142 and Schachermeyr, *Klio*, xxxii, 1939, pp. 261 ff.

<sup>44</sup> Curvilinear types in the East: Mallowan, *Iraq* ii, 1935, pp. 25 ff.; Speiser, *BASOR*, lxii, 1936, p. 11; 71, 1938, p. 22; Garstang, *LAAA*, xxiii, 1936, p. 71; xxiv, 1937, p. 127; R. Engberg and G. Ship-ton, *Notes on the Chalcolithic and Early Bronze Age Pottery of Megiddo*, Chicago, 1934, p. 5; Dikaiois, *Iraq* vii, 1940, pp. 72 f., 77; H. H. von der Osten, *The Alishar Hüyük, Seasons 1930-32* i. Chicago 1937, p. 35.

## A ROMAN AND A CHINESE BRONZE

OF THE two bronze devices in figs. 1, 2, the left-hand one is Roman, the right, Chinese. The Roman bronze, 9.6 cm. high, is the top piece of an iron or wooden pole, rising between the body of a chariot and the wheel (*Radabweiser*). After Mercklin (*JdI.* 48, 1933, pp. 84 ff.). Alföldi (*Arch. Értésítő* 48, 1935, pp. 190 ff.) has collected and interpreted numerous similar bronzes, from almost all provinces of the Empire: the piece figured (fig. 1) comes from Hungary and is in the Leyden Museum.<sup>1</sup>



FIG. 1.—BRONZE, LEYDEN, RIJKSMUSEUM  
VAN OUDHEDEN



FIG. 2.—BRONZE, BRITISH  
MUSEUM

The bottom part is a tube of circular section, plain; at the end of an axis, holes for a nail which fixed the bronze on a wooden peg. The upper part is the head of an eagle. Its neck, covered all over with feathers, is set off from the tube by a projecting ring. Here a hook is attached, round which the reins were bound. It has the shape of a human finger, sharply bent, a thumb with an upper member of exaggerated length. The "metaphorical" use of hand and finger is not uncommon in classical art: pestles often have the form of a bent finger.<sup>2</sup> The pole-tops illustrated by Mercklin and Alföldi show great variety: the tube is either circular or polygonal in section, the top finial is an eagle, panther, horse, mule, etc.; heads and busts of gods and mortals also occur. There is either one hook or a pair of hooks, interpreted as finger, bird, serpent, "basilisk."

The Chinese bronze (fig. 2) lacks the plain bottom part. The whole tube is covered

<sup>1</sup> I am indebted to the Deputy Keeper of the Leyden Museum, Dr. Bursch, for the photograph, published before by Mercklin, *op. cit.*, p. 113, fig. 30, left, and Alföldi, *op. cit.*, pl. 2, 7.

<sup>2</sup> For hand-shaped handles of vessels and tools see *JdI.* 44, 1929, p. 216; Bosch-Gimpera, *Etnologia de la península Ibérica*, p. 270, fig. 221, and Jacobsthal, "Diskoi" (93. Berliner Winkelmannsprogramm), pp. 4, 5. For finger pestles Beazley refers me to Blinkenberg, *Lindos*, p. 748 and Deonna in *Délos* xviii, p. 117 ff.



with feathers and ornaments. The finger is proportionally smaller than in the Roman devices, and grows from higher up; there seems to be no indication of a nail.<sup>3</sup> The specimen illustrated was published by W. Perceval Yetts, *The Eumorfopoulos Collection* ii, pl. 54, no. B 225, and is one of many such.<sup>4</sup> As long as there were only pieces in museums acquired from dealers, the purpose of the bronzes remained doubtful, and unsatisfactory explanations were put forward. Then the Noin-Ula graves in Mongolia yielded a wealth of similar devices. Professor Yetts convincingly pointed out that they were fixed on poles which supported sepulchral canopies, and the strings of these were bound round the hook.<sup>5</sup>

The Chinese bronzes are about half the size of the Roman, but it goes without saying that this odd combination of an eagle and a human finger cannot have been invented independently twice.<sup>6</sup> The Noin-Ula graves as a whole are dated by a Chinese graffito on a lacquer bowl to 2 B.C. or thereabouts.<sup>7</sup> The style of the bronze, as Professor Yetts was kind enough to inform me, points to about the third century B.C., but had apparently been in existence for several centuries. The date of the Roman chariots is in the later second and third century A.D.

As in analogous cases,<sup>8</sup> the device had its origin in the Near East, whence it migrated eastward and westward. There was always a strong influence on the West from these Eastern quarters in all things connected with horses and chariots.<sup>9</sup> Among the pole-tops of these Roman chariots are two other types which point to an Eastern source, those with addorsed horse- and bird-protomae,<sup>10</sup> Mercklin, *op. cit.*, figs. 40, 41.

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<sup>3</sup> Owing to present conditions, I could not get at the originals.

<sup>4</sup> A pair in Berlin, Ostasiatische Abteilung der Staatlichen Museen; see *Ausstellung Chinesischer Kunst*, Berlin, 1929, no. 64.

<sup>5</sup> Pole-tops of plainer form with a lateral short spike, from Noin-Ula, *op. cit.*, nos. 1265, 1266. On the tombs and their furniture see W. Perceval Yetts, *Burlington Magazine* 48, 1926, p. 168; Borovka, *AA.* 41, 1926, pp. 341 ff.; see also Ebert, *Reallexikon der Vorgeschichte* viii, p. 544.

<sup>6</sup> There is a partial analogy from the East, the bronze battle-axe from Pinega, gov. Archangel, Ananyino culture, Borovka, *Scythian Art*, pl. 64, A: its tubular socket has on top an eagle's head.

<sup>7</sup> Yetts, *op. cit.*; Kümmer, *AA.* 42, 1927, p. 451; *Ausstellung Chinesischer Kunst*, Berlin, 1929, no. 1255.

<sup>8</sup> Jacobsthal, *Early Celtic Art*, chapter II.

<sup>9</sup> Rostovtzeff, *The Animal Style*, pp. 42 ff.; 59, and *Syria* 13, 1932, pp. 321 ff. On the Eastern origin of Roman phaleræ see Steiner, *Bonner Jahrbücher* 114, 1905, pp. 16 ff.

<sup>10</sup> V. Müller, *Orientalische Literaturzeitung* 1925, pp. 785 ff.; Jacobsthal, *Early Celtic Art*, p. 29.

#### ERRATA

The Editor regrets the following corrections in Jacobsthal's article on Livy xxxvi, 40 ("Boian Silver"), *AJA.* xlvii, 1943, pp. 306 ff.

P. 306, § 2, line 3. Read show for shown

line 4. Read monte for Monte

note 2, line 3. Read Placentinorum for Piacentinorum

P. 308, § 2, line 5. Read εἰς for εἰς

line 6. Read ἀργυρίῳ. τὸ δὲ πλῆθος ἦν τῶν. . . . .

§ 3, line 3. Read factis. . . . .

P. 308, note 15d, last line and fourth line from bottom. Read Gàbrici for Gabrici

P. 309, § 2, line 2. Read Comenses for Comeneses

line 9. Delete the inverted commas

note 16, line 1. Read προεκομίσθη for προεκομίση

line 3. Read εἴκοσι for εἴκοσι

note 20, line 4. Read beehive for bee-hive

- P. 310, § 6, line 5. Read αὐτά for αἰτά  
line 8. Read Κρητικαὶ for κρητικαί; ἀναμειγμέναι for ἀναμειγμένα  
line 9. Read παραπεπηγυῖαι for παραπεπηγυῖαι
- P. 311, § 2, line 3. Read sul for sulla  
Caption of fig. 1. Delete Insubrian  
note 24a. Read Com. for Comm.
- P. 312, § 1. Read torques for torque  
§ 4, line 1. Read Cenomani for Insubres  
last line. Delete Insubrian  
note 28. Read Schránil for Schranil  
note 29. Read Hradischt for Hdradischt  
note 32, line 3. Read transalpine for Transalpine

## SYMBOLS OF THE AUGURATE ON COINS OF THE CAECILII METELLI

THE curved staff of the augur (*lituus*) and the jug with one handle which appear on *denarii* of Q. Caecilius Metellus Pius (consul, 80) and his adopted son, Q. Caecilius Metellus Scipio (consul, 52) have never been satisfactorily explained. The coins of Metellus Pius were issued during his proconsulship in Spain (79-71) when he was commanding Roman forces in the war against Sertorius.<sup>1</sup> There are two types with identical obverse showing a diademed female head to the right; the figure is identified as Pietas by the emblem of the goddess, the stork,<sup>2</sup> to the right of the head. The reverse of the first type shows an elephant, the most common emblem of the Caecilii Metelli, and the letters Q(uintus) C(aecilius) M(etellus) P(ius) I(mperator) in the exergue. The second type with which I am concerned (fig. 1) combines with the same obverse a reverse showing a *lituus* and a jug with one handle within a laurel wreath. In the exergue is the inscription IMPER, referring to a salutation given Metellus Pius by his soldiers as a result of a successful battle.<sup>3</sup>



FIG. 1.—*Denarius* OF Q. CAECILIUS METELLUS PIUS



FIG. 2.—*Denarius* OF Q. METELLUS SCIPIO

The coin of Metellus Scipio (fig. 2), a member of the Scipiones Nasicae who was adopted by Metellus Pius, was issued in Africa in 47-6 when Metellus Scipio was in command of the Pompeian forces.<sup>4</sup> The obverse has on it a turreted female head to the right, between winged caduceus and an ear of wheat; below is a prow and above an oblong object which cannot be identified. The head and symbols and the inscription CRASS IUN LEG PRO PR are all within a laurel wreath. The head probably represents Utica, the headquarters of the Pompeians.<sup>5</sup> P. Licinius Crassus Iunianus

<sup>1</sup> Mommsen, *Röm. Münzwesen*, p. 612; Babelon, *Monnaies de la République romaine* i, pp. 274 f.; Grueber, *Coins of the Roman Republic in the British Museum* ii, pp. 357 f.

<sup>2</sup> See Wissowa, s. v. *Pietas*, Roscher, *Lexikon*.

<sup>3</sup> The exact date of these coins in Metellus Pius' proconsulship is uncertain. Mommsen placed them in 75-1, Babelon ca. 79, Grueber (who accepts the dating of Count de Salis) in 79-7. Grueber says that the indications of the hoards favor the earlier date, and adds that the coins must be placed before the arrival of Pompey in 76, after which time the command was divided. But it is noteworthy that Metellus' chief victories (Livy, *Per.* xci, xcii), that over Hirtuleius and that over Sertorius at Saguntum both occurred in 75 after Pompey's arrival. On the chronology see Schulten, *Sertorius*, 1926, pp. 108 ff. Plutarch, *Sertorius* 22, records a salutation of Metellus as *imperator* and apparently places it after the victory at Saguntum.

<sup>4</sup> Babelon, *op. cit.* ii, p. 280; Grueber, *op. cit.* ii, p. 572.

<sup>5</sup> Cf. *Bell. Afr.* 24, 1. See S. Gsell, *Histoire ancienne de l'Afrique du Nord* viii, 1928, p. 40.



was *legatus pro praetore* of Metellus Scipio. The reverse shows a military trophy with arms (cuirass, with sword attached to the waist, and helmet, bow and quiver, and round shield) between a pitcher with handle and a *lituus*. Around these symbols is the inscription METEL PIUS SCIP IMP.

The *lituus* is the most familiar symbol of the augurate, and with it on the coins of a number of augurs—Sulla, Pompey, the younger Lentulus Spinther, the dictator Caesar, (fig. 3), Mark Antony, A. Hirtius, and Octavian—appears a jug with one handle similar to the one found on the coins of the two Caecilii Metelli.<sup>6</sup> This jug is not a *praefericulum*, as Babelon calls it, for the *praefericulum* had no handle;<sup>7</sup> nor is it a *capis*, the name that Grueber gives to it, for the *capis* belonged not to the augurs but to the pontifices.<sup>8</sup> These were both sacrificial vessels, and the augurs had nothing to do with sacrifice. The jug looks more like the ordinary Roman water pitcher, *urceus*. Perhaps, as Mrs. Agnes Baldwin Brett has suggested to me, the jug of water, like the raven which appears with *lituus* and jug on coins of the augur Mark Antony, was used in augury. But, as far as I have been able to find out, there is no evidence on the subject in the ancient records of the augurs.

Whatever the use of the pitcher, there can be no doubt that, with the much more common *lituus*, it was a regular symbol of the augurate. The difficulty in interpreting our coins<sup>9</sup> is that the two Caecilii Metelli are nowhere attested as augurs. They were both pontifices, and the elder was for many years *pontifex maximus*. Since no man of the late republic, except Caesar after he became dictator, is known to have held both the chief priesthoods of Rome, it is unlikely that these two men were augurs as well as pontifices. The obvious explanation is that these symbols, like the elephant of the Caecilii Metelli, which commemorates L. Caecilius Metellus' capture of elephants in 250,<sup>10</sup> recall an ancestor of the two men. It was probably some other



FIG. 3.—Aureus of CAESAR

<sup>6</sup> See Grueber, *op. cit.* iii, p. 115, Index s. v. *lituus*. Figure 3 (from Bahrfeldt, *Röm. Goldmünzenprägung*, pl. iii, 23) is an aureus of Caesar, dictator iterum, showing on the obverse the symbols of the pontificate, *capis* (or *simpulum*?) and axe, and on the reverse the symbols of the augurate, *lituus* and jug. Caesar, who was already *pontifex maximus*, became an augur after he returned to Rome late in 47. Cf. Dio xlii, 51, 4. The only coins with *lituus* and jug which cannot be assigned to a known augur are those of the two Caecilii Metelli and that of Q. Cassius, probably the tribune Q. Cassius Longinus who fled to Caesar with Mark Antony in 49. Either Cassius himself or one of his ancestors must have been an augur. See Grueber, *op. cit.* i, p. 481.

<sup>7</sup> Festus (Paulus), p. 293 L: *Praefericulum vas aeneum sine ansa patens summum velut pelvis, quo ad sacrificia utebantur.*

<sup>8</sup> Arruntius ap. Prisc., *G. L. K.* ii, p. 251. *Vasis genus pontificalis.* Cf. Livy x, 7, 10: *conspiciatur cum capide ac lituo*, where Livy is speaking of the pontificate and the augurate. The *capis* had a handle. Cf. Varro, *L. L.* v, 121. It was probably used interchangeably with the ladle (*simpulum* or *simpuvium*) by the pontifices.

<sup>9</sup> Mommsen, *l. c.*, says he is unable to explain the insignia on these coins. Babelon takes them as symbols of the *pontifex maximus* and Grueber thinks that they may refer to the auguries taken before Metellus Pius went to Spain.

<sup>10</sup> The battle is frequently referred to. See for instance Polyb. i, 40; Livy, *Per.* xix; Diod. xxiii, 21. A cursory examination of the coins of the Caecilii Metelli (Babelon, I, 257–80) shows that the moneyers of the family made use of the symbol very frequently.

ancestor, for L. Caecilius Metellus was also *pontifex maximus*, and not, so far as we know, an augur. The only augur known among the earlier Caecilii Metelli, Q. Metellus Macedonicus, belonged to a collateral line. The name Pius, which Metellus Pius acquired because of his successful efforts to have his father recalled from exile,<sup>11</sup> provides a clue to the identity of the person honored. The son used throughout his life the name which the people gave him in his youth,<sup>12</sup> and in the image of Pietas on these coins kept alive his father's memory. I would explain the *lituus* and the jug on these coins as a record of the augurate of Metellus Pius' father, Q. Metellus Numidicus, consul in 109.

There is, to be sure, no direct ancient evidence that Metellus Numidicus was an augur. But such priests were recruited from the most prominent consular families, and in his day the Caecilii Metelli were the leading house in Rome. Within twelve years in this period, Velleius (ii. 11, 3) notes, the consulships, censorships and triumphs of the house numbered more than twelve. With the other honors were combined the great priesthoods. The chief man of the house in the preceding generation, Metellus Macedonicus, uncle of Numidicus, who died in 115, was for many years an augur, and Metellus Delmaticus, brother of Numidicus, was *pontifex maximus*.<sup>13</sup> It can hardly be doubted that after the death of Macedonicus another member of this prolific leading house was elected to the college of augurs. The augurs had a rule which prevented two members of the same family from serving at once,<sup>14</sup> and it is noteworthy that no other augur among the Caecilii Metelli is known for this period.

Moreover, the circumstances of Metellus Numidicus' exile are better understood if he was an augur.<sup>15</sup> The agrarian law of the tribune Saturninus in 100 had in it a clause requiring all senators to take oath to abide by the law. The law was passed in a scene of violence in which the urban populace was aroused against the Italians and the soldiers of Marius who had been brought to Rome for the *comitia*. The citizens in Rome insisted that during the meeting there had been thunder, an omen which, if attested by the college of augurs, would have made the law unconstitutional.<sup>16</sup> In the senate Metellus Numidicus declared that he would not take the oath to observe a law *quam non iure rogatam iudicaret*.<sup>17</sup> If he was an augur, his insistence on the unconstitutionality of the law becomes more intelligible. The regular procedure was for the senate to refer the matter to the college of augurs who decided whether the omen at the *comitia* made the law invalid. In the next year the college

<sup>11</sup> Vell. ii, 15, 4; Val. Max. v, 2, 7; *De vir. ill.* 63; Appian, *B. C.* i, 33. For the evidence see Niccolini, *I Fasti dei Tribuni della Plebe*, 1934, pp. 206-10.

<sup>12</sup> As consul in 80 Metellus Pius plead with the people to elect to the praetorship Q. Calidius, the man who as tribune had proposed the bill recalling Numidicus. See Cic. *Planc.* 69; Val. Max. v, 2, 7.

<sup>13</sup> For a family tree of the Caecilii Metelli see Syme, *The Roman Revolution*, 1939, Table I. For biographical details see s. v. *Caecilii Metelli*, *RE*. In the generation after Numidicus three members of the house served as pontifices, and one member, Metellus Celer, was augur.

<sup>14</sup> Dio xxxix, 17, 1.

<sup>15</sup> See Niccolini, *op. cit.*, pp. 199-204.

<sup>16</sup> Cic. *De Leg.* ii, 31 (on the functions of the augur): *Quid religiosius quam cum populo cum plebe agendi ius aut dare aut non dare? quid? leges non iure rogatas tollere ut Titiam decreto conlegii, ut Livias consilio Philippi consulis et auguris?* Cf. also in *Vatin.* 20; *De Domo* 40, and the comments which Cicero as augur makes on Antony's unconstitutional laws, *Phil.* ii, 80; v, 8.

<sup>17</sup> Cic. *Pro Sest.* 101. *Q. Metellus — cumque in eam legem quam non iure rogatam iudicaret iurare unus noluisset, de civitate maluit quam de sententia demoveri.*

made such a decision about another agrarian law.<sup>18</sup> In this case the augurs seem not to have been consulted. The consul Marius urged the senators to swear at once, and then consider the omen and decide the question of constitutionality after the rioting Italians had gone home.<sup>19</sup> All the senators took the oath except Metellus Numidicus, who refused to waver from his expressed opinion, and so was exiled by a bill of Saturninus. When Metellus Pius wished to recall his father's memory, the symbols of the augurate were peculiarly appropriate reminders of Numidicus' steadfastness and devotion to the state religion.

Why then do we find the same symbols used by Metellus Pius' adopted son when he was commanding the Pompeian forces in Africa? He had inherited the name Pius, and he might well have issued a type with an obverse similar to that used by Metellus Pius. But he also employs another symbol, spoils of war. The African war was waged by propaganda as well as by arms, and one of the strongest assets of Metellus Scipio, who was not an able soldier,<sup>20</sup> was supposed to be his name Scipio. There was a legend that no Scipio could be conquered in Africa, and Caesar took it seriously enough to place in the forefront of his army an insignificant man who was said to belong to the Scipiones Africani.<sup>21</sup> Caesar doubtless reminded people that Metellus Scipio, who had already made himself ridiculous by mixing his family with the Africani,<sup>22</sup> belonged not to the Africani, but to the collateral house of the Scipiones Nasicae, and that an ancestor of his had been famous not for fighting in Africa, but for opposition to the Third Punic War. Not being able to make use of his own ancestors in his propaganda, Metellus Scipio turned to the family that he had entered by adoption. On some of his coins he placed the elephant of the Caecilii Metelli, and on this one he put, with the symbols of the augurate, a representation of spoils of war which would seem to commemorate the victories over Jugurtha that gave Numidicus his triumph and his honorary *cognomen*. Caesar at the same time was making use of the memory of his relative, Marius, who had wrenched from Numidicus the command and the final victory in the Jugurthian War.<sup>23</sup> It may be noted that with the Numidian king Juba, who was Metellus Scipio's ally, the name of Numidicus would have been much more popular than that of his enemy Marius, for Juba's house owed its throne to the Sullan reorganization that followed the defeat of the Marian forces.<sup>24</sup>

Although other types, such as the elephant and the prow of a ship, constantly recur on coins of the Caecilii Metelli, the *lituus* and the jug, recognized symbols of

<sup>18</sup> This was the *Lex Titia* referred to in the passage from the *De Legibus* quoted in note 16. In the same passage there is a reference to the senate's action in 91 B. C. when the laws of the tribune Livius Drusus were declared unconstitutional. See also Asconius, p. 69 (Clark). <sup>19</sup> Appian, *B. C.* i, 30.

<sup>20</sup> See the caustic comment of Caesar on Metellus Scipio's salutation as imperator in Syria, *B. C.* iii, 31: *detrimētis quibusdam circa montem Amanum acceptis imperatorem se appellaverat*.

<sup>21</sup> Plut. *Caes.* 52; *Cato Min.* 57; Dio xlii, 57, 5; Suet. *Iul.* 59; Sen. *Ep. Mor.* 71, 10.

<sup>22</sup> Cic. *Ad Att.* vi, 1, 17. Metellus Scipio was actually descended through the female line from the elder Africanus (see the family tree, s. v. *Caecilius*, 99, *RE.*), but he had by mistake placed the features of Africanus on a statue of his paternal grandfather, P. Cornelius Scipio Nasica Serapion.

<sup>23</sup> *Bell. Afr.* 32; 35; 56. The historian Sallust, who later in his *Bellum Iugurthinum* did justice both to Metellus Numidicus and to Marius, was with Caesar in Africa at this time.

<sup>24</sup> On Scipio's subservience to Juba in Africa see *Bell. Afr.* 57. On the Sullan settlements in Numidia see Gsell, *op. cit.* vii, pp. 279 ff. Cf. *Bell. Afr.* 56.

the augurate, are found only on *denarii* of Metellus Pius and Metellus Scipio, both of whom were (the latter by adoption) descended from Metellus Numidicus. The well known Pietas of Metellus Pius makes it probable that he was honoring his father, and the circumstances of Numidicus' exile make it likely that he was an augur. The spoils combined with the symbol of the augurate on the coins of Metellus Scipio apparently record Numidicus' victories in Africa, which provided useful propaganda for Metellus Scipio when he was commanding Pompeian forces there. We are probably justified in adding Metellus Numidicus' name to the list of augurs of 100 B.C.<sup>25</sup>

BRYN MAWR COLLEGE

LILY ROSS TAYLOR

<sup>25</sup> For the list of augurs known see C. Bardt, *Die Priester der vier grossen Collegien*, Berlin, 1871; for additions to the list, Münzer, *Hermes* lii, 1917, pp. 154 f.

## A PAESTAN VASE

### I

THE bell-krater reproduced in figs. 1-3 was bought in London and acquired by the Ashmolean Museum in 1942.<sup>1</sup> It bears on the bottom a modern graffito, LD :: B N°5, which may one day give a clue to its history. The height is 336 mm., the width 322. The preservation is almost perfect: only the white and red used for details have faded or flaked in a few places. On the front of the vase, Dionysos and a young satyr. The god holds a thyrsus in his left hand, and in his right an object which is often depicted on Paestan and Campanian vases. Tillyard (*Hope Vases* 146) describes it as a skewer of fruit. An alternative would be round cakes (perhaps made of yeast) stuck on a skewer.<sup>2</sup> The thing is shown standing on altars as well as held in people's hands, but that is no objection to either explanation. One would wish that the skewer itself were sometimes indicated, but it is not: a word more about this presently. A short himation, with an embattled border, hangs from the left forearm; the feet are shod; a cord, with beads or the like attached to it, passes bandolier-like over the left shoulder and under the right armpit; there is also a string of beads round the left thigh, but the string is not indicated. Round the right wrist a bracelet. The hair, parted in the middle, and reaching the shoulders, is wreathed with ivy and bound with a spotted fillet. The shaft of the thyrsus ought to appear in front of the himation, but is drawn as if it were on the farther side of it. The satyr holds a wreath in one hand and a thyrsus in the other; wears low boots, an ivy wreath, a bandolier set with studs or beads, an armlet and a thighlet both of the same nature as the bandolier. He leans on his thyrsus with one leg crossed, and gazes at his lord. A small sprig of ivy hangs above, between the pair. There is something image-like, idol-like, remote, yet life-like in the attitude of Dionysos, and a pleasant air of solemnity about the group. On the reverse, two youths, wreathed, shod, in himatia, with sticks. One holds a skewerful of fruit or cakes; the right hand of the other shows between the folds of his garment, and above the curved line indicating the upper edge of the hand there is a white dot representing a fruit or a cake. The background is not fully blacked in where it skirts the faces, which blurs the profiles. Above the pictures, a band of laurel or olive; below, wave-pattern; at the handles palmettes. White, mixed with glaze diluted to yellow. is



FIG. 2. — OXFORD 1942. 203

<sup>1</sup> My thanks are due to Mr. E. T. Leeds for permission to publish the bell-krater in Oxford, and to Prof. A. D. Trendall for the photograph reproduced in fig. 6.

<sup>2</sup> They might be skewered either after baking, or before. Athenaeus (3, 111b) speaks of the ὀβελίας ἄρτος, so called ἥτοι ὅτι ὀβολοῦ πιπράσκειται, ὡς ἐν τῇ Ἀλεξανδρείᾳ, ἣ ὅτι ἐν ὀβελίσκοις ὠπτᾶτο; this would be a bigger thing.





FIG. 1.—OXFORD 1942. 203

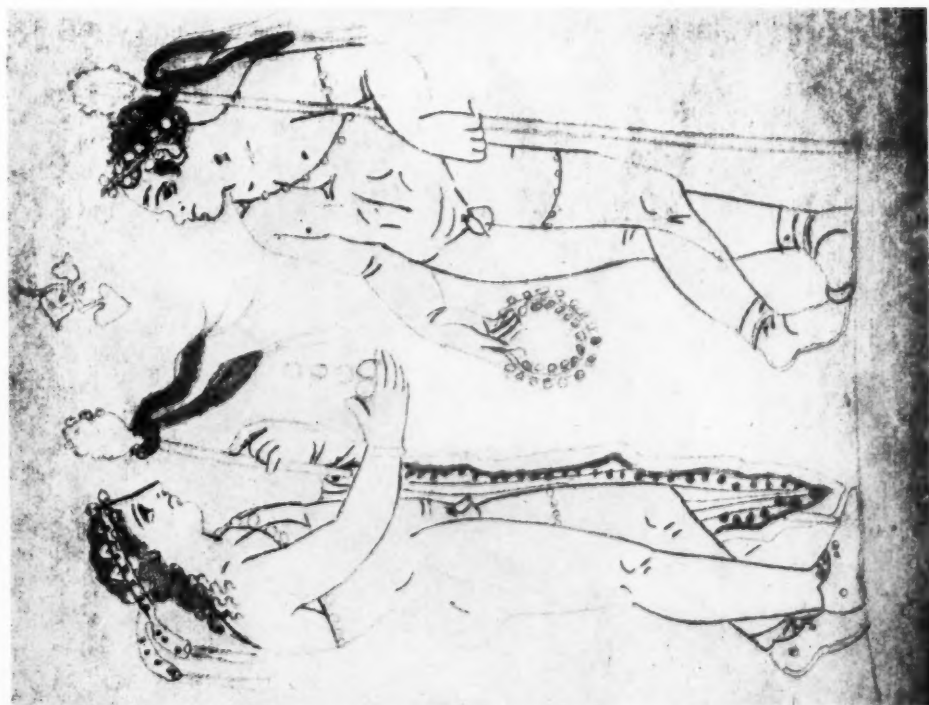
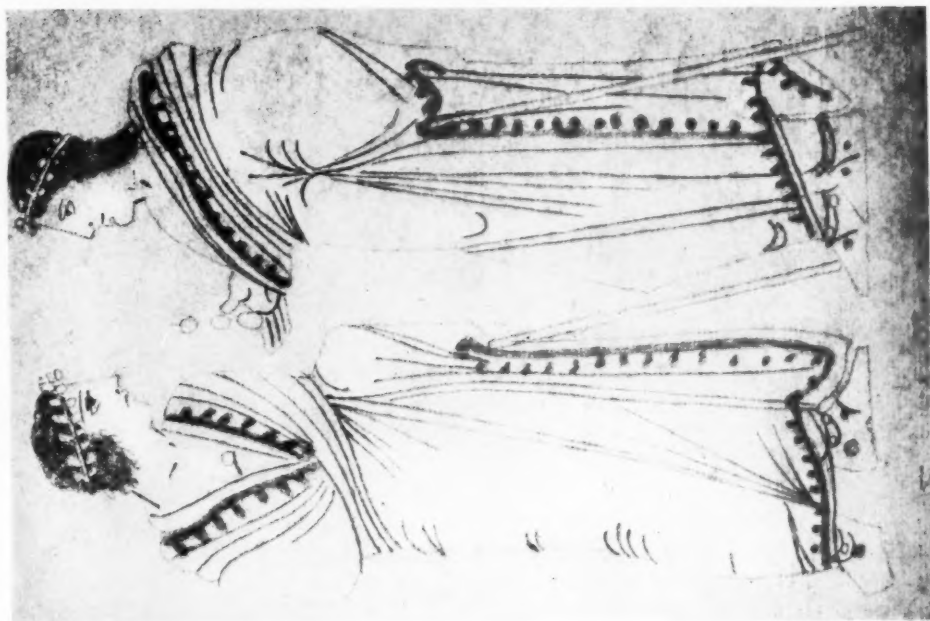


Fig. 3. — Oxford 1942. 293

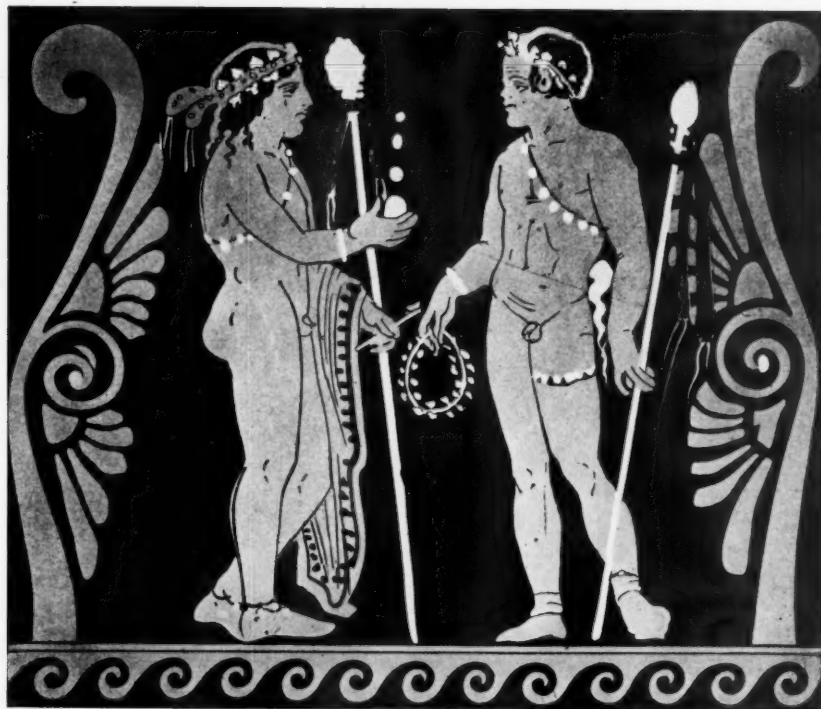


FIG. 4. —AFTER *Museum Disneianum*, PLL. 119-120

used for the thyrsi, the sticks, the wreaths, the bracelet, the beads or studs, the studs or hooks on the boots and shoes, a ring round each boot, the sprig of ivy, the "fruit;" on the obverse, for the soles also, and for the dots at the inner end of the spiral tendrils in the handle-ornament. The streamers of the thyrsi are dark purple-red, with white tags. Relief lines are not used for the contours on the reverse, or in the floral decoration; but on the obverse the forehead-nose line of Dionysos is lined with relief, and the lower edge of his right hand, his shanks, the forward part of his left sole; also the satyr's nape, left shoulder and upper arm, and legs, except the lower half of the left thigh. The quality of the relief-lines, whether along the contour or within it, is good. Some of them, thin and light-colored, might escape notice: these, and other particulars invisible in the photographs, appear in the drawings (fig. 3), which on the other hand do not give the expressions of the faces quite correctly; I have also forgotten to thicken the cords of the bandoliers.

A replica of the Oxford vase has long been known: it was in the Disney collection, and seems to have disappeared, but very creditable drawings of it were published by the owner, nearly a hundred years ago, in his *Museum Disneianum*, pll. 119-120 (whence fig. 4). Looking at the two obverses side by side, one cannot help thinking of a dream in which a well-known picture appears with puzzling alterations, or of a tableau vivant in which the actors, when the curtain rises for an unexpected encore, have hastily reassumed their poses but have not had time to get them quite right. The Oxford vase seems the better of the two: but it is not fair to compare a copy with an original. We need not go into all the divergences of detail: the treatment of the spots on the fillet is not one of them, for Disney's draughtsman has simply forgotten to black them in. One difference is worth notice: the Disney Dionysos holds in his left hand, besides the thyrsus, a short stylus-like object, with a projection at one end and a point at the other: is it perhaps a fruit-skewer?

These two vases must be by one hand. Further, it is clear that they are Paestan; and from the shape of the krater and the style of the drawing, that they belong to the height of the Paestan fabric, to the group of Asteas and Python. Watzinger (in *FR.* iii, p. 372, no. 16) attributed the Disney krater to Python, chiefly on account of the reverse; Trendall, in his *Paestan Pottery* (72 and 120, no. 123) hesitated between Python and Asteas: "the obverse," he says, "has decided affinities with the work of Asteas (cf. Madrid 11054, 11058, British Museum F153), but the draped youths on the reverse are much more in Python's manner," and he agrees with Watzinger in assigning the vase to Python.

Let us consider the reverses of our two kraters, on which the attribution of the Disney vase to Python was mainly based. The reverses of the four following vases, all bell-kraters, may be said to be replicas of our two:—

(1) Lost: formerly, according to Passeri, in the Vatican Library. Passeri *Picturae Etruscorum*, pll. 123-4, whence fig. 5. Trendall no. 138, attributed to Python.

(2) Louvre K247. Millin 2, pl. 23; A only, Trendall pl. 12, a. Trendall no. 51, attributed to "the Asteas group." Millin's draughtsman, Clener, has doubtless altered the style of the drapery, as he has in the Louvre Kadmos krater, Millin 2, pl. 8 (compare Trendall pl. 19, d).

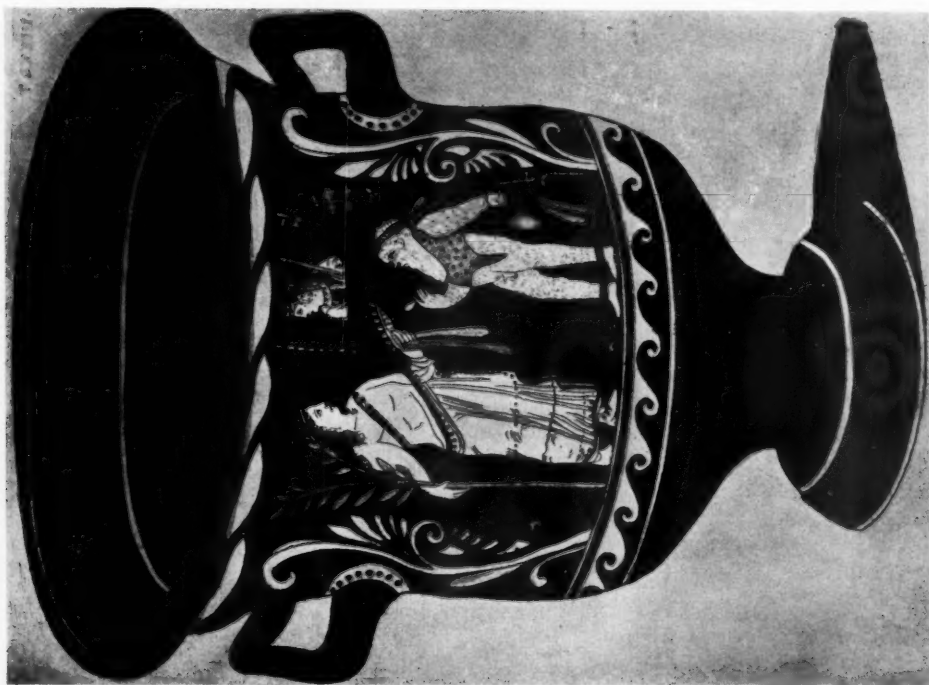
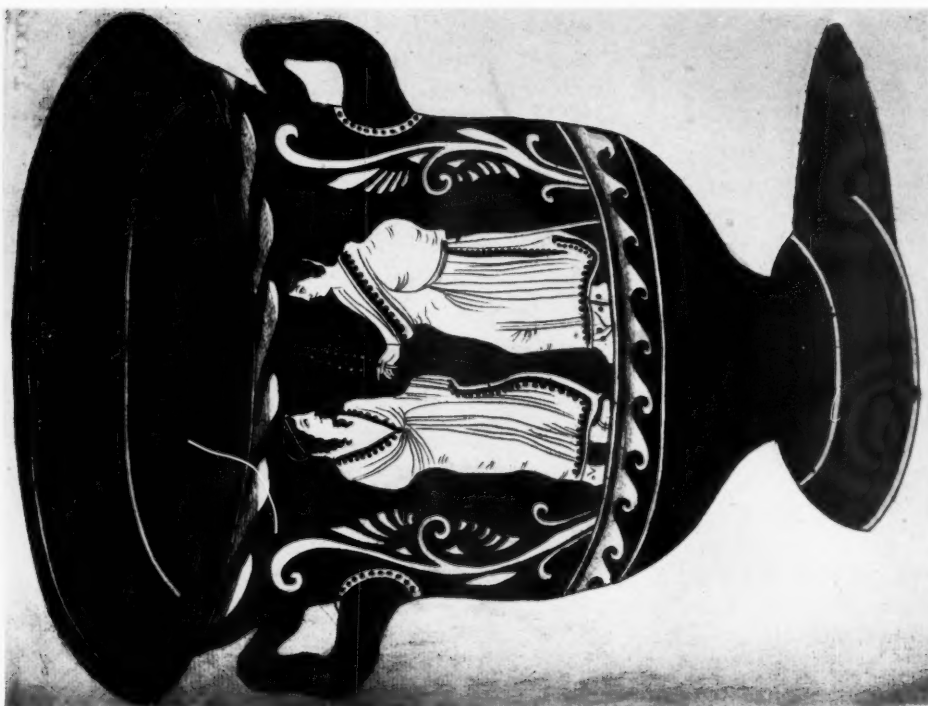


FIG. 5.—AFTER PASSERI, *PL.* 123-4



(3) Agrigento, Baron Gaspare Giudice, 193. Trendall pl. 10, c and fig. 17. Trendall no. 45, attributed to Asteas.

(4) Louvre K154. Trendall pl. 28, a. Trendall no. 241, attributed to the Painter of the Boston Orestes. The design is the same as before, except that the left hand of the youth on the left is visible and his right hand not. The style is of course different.

There are several other vases in which the design, or part of it, is similar, but not the same: two bell-kraters may be mentioned:—

(1) London F189. Trendall, pl. 22, d and pl. 27, b. Trendall no. 139, attributed to Python. The left-hand figure is the same as in our two vases, but the other is not.

(2) London F153. Trendall fig. 21 and pl. 10, b. Trendall no. 46, attributed to Asteas. The figures are reversed, and the stick of the one in profile is different.

It appears from this list that the *design* of our two reverses was not confined to one artist but was common property, as might be expected, of the school. It is when we come to the style of the drapery that we are reminded of Python: in particular, the groups of small horizontal folds set at intervals along the free leg of the left-hand figure are seen in two of his most important works, the Orestes krater in London (Trendall, pl. 19, b; clearer in Tillyard, pl. 37, 267) and the Kadmos krater in the Louvre (Trendall pl. 19, d), as well as in several minor vases that must also be his (Trendall, pl. 27, d, no. 129; Trendall, pl. 27, a, no. 124; Trendall, no. 136, Tillyard, pl. 37, 270). These folds, however, are not restricted to Python; they occur, for example, in Louvre K248 (fig. 6; Trendall no. 58, attributed to "the Asteas group"), and the beginning of them, at least, in the Giudice vase, Trendall no. 45 (Trendall fig. 17, attributed to Asteas) and in the Louvre, K247, no. 57 (Trendall pl. 12, a, attributed to the Asteas group).

Apart from the drapery of the youths, the style of our two vases does not specially recall Python. The groups on the obverse are well designed, the figures well proportioned and free from Python's tricks—the compression of the facial features, the fat waist, the gross neck, the stiff postures, the mannered drawing of the legs. With the Disney obverse Trendall has compared London F153 (his fig. 21 and pl. 10, b, no. 46), and the comparison holds good for the Oxford obverse. Add three other bell-kraters, one in the Vatican (Trendall fig. 22, no. 42), the second in the Giudice collection (Trendall fig. 17 and pl. 10, c, no. 45), the third in the Louvre, K248 (A, fig. 4; Trendall no. 58). The Giudice vase, and London F153, are also connected with our pair, as we have seen, by the design of the reverse. Louvre K248 is attributed by Trendall to the 'group of Asteas,' the other three vases to Asteas himself.

A possible solution of our difficulty would be to ascribe the obverse of our vases to Asteas and the reverse to Python: but in the Oxford vase I see no evidence for a change of hand from front to back; on the contrary, everything suggests that they are by the same hand.

If our two vases are by Python, it is a Python who has not yet fully developed the somewhat mannered style of his signed vase and the others that go closely with it. If the choice were between Asteas and Python, Asteas would have as good a claim as Python: but the choice is not so simple, and the painter may be one of the ex-

tremely well-drilled associates of these two. Asteas and Python must have worked together: the fabric of the vases they decorated is the same, and the same potter must have supplied them; the technique, composition, patternwork, drawing of the figures are so alike that the hypothesis of two neighbouring establishments, influencing each other, is less probable than that of a single establishment: we may speak of "the workshop of Asteas and Python." Of this workshop the Oxford and



FIG. 6. — LOUVRE K 248

Disney vases are characteristic products. The pictures, from the attitudes down to the smallest particulars of fact and rendering, find countless analogies in other products of the same workshop: yet I cannot point to any other vase resembling ours so closely that it may with certainty be attributed to the same hand.

The Oxford vase, modest though it be, is among the happier products of the establishment. The more pretentious efforts are failures: the "Alcmena" to which Python set his name is a monstrosity, and so is his unsigned "Orestes at Delphi." More might be expected of Asteas: but his "Kadmos," his "Hesperides," and even

his "Madness of Herakles" are as bad as any Python. His "Rape of Ajax" is amusing, but does not wear well: a Tarantine phlyax-painter would have done it better. The best of the signed vases is the least elaborate, the "Burglars." Of unsigned Paestan vases the "Odysseus and the Sirens" is a commendable sea-piece. Most of the phlyax vases are rather good, and the simple two-figure groups of "Dionysos and a phlyax" pass without a break into the groups of "Dionysos and a satyr," "Dionysos and Silenos," "Dionysos and Pan," "Dionysos and a maenad," of which our two pictures are examples. The two-figure groups vary in quality, but nearly always have an agreeable tang of popular, provincial art. It is a relief to turn to these thickset, slow-witted, intent creatures after the perpetual elegance of late Apulian vase-painting with its talent for trivializing even the noblest theme.

Such praise as can justly be awarded does not apply to late or to earliest Paestan, but only to Asteas, Python, and their group.

## II

It is not easy to glean after Trendall, but here are a few additions. His no. 136 is now in the University Museum, Sydney, and the obverse has been republished by Trendall himself in *The Union Recorder* for June 25th, 1942. His no. 90 passed into the Noorian collection and is figured in the catalogue of the Parke-Bernet Galleries, New York, 17th-19th December 1942, p. 6, 46, a copy of which I owe to the kindness of Miss Richter. In *Dioniso* 7, p. 162, Dr. Pesce publishes a bell-krater, by Python or near him, formerly at Ravello in the possession of Mrs. Tallon-Lacaita. He does not say that it is Paestan, being less interested in the style than in the interpretation: it appears that the "egg" in the hand of the phlyax is cosmogonic and alludes to mystic re-birth, the wreath to the guerdon awaiting the Orphic initiate, the plants on the ground to the meadows of Persephone; and that the phlyax is not an actor but a departed soul who after passing through all the grades of initiation has attained eternal joy. A bell-krater, from Cumae, in the Majewski Museum, Warsaw, has been published by Miss Bernhard in *Wazy greckie w Muzeum Im. E. Majewskiego w Warszawie* pl. 10 and recognized by her as Paestan (A, Dionysos seated, and a maenad; B, two youths): Dohrn, in *Gnomon* 14, p. 592, observes that it is "probably from the workshop of Asteas and Python." A Paestan bell-krater formerly in the Vogell collection (A, *Sammlung Vogell* pl. 5, 11, no. 549, whence fig. 7) seems not to be mentioned by Trendall (A, Dionysos seated; B, Dionysos): it recalls Naples 905 (Trendall pl. 12, c, no. 63). On his p. 67 Trendall says of a bell-krater formerly in the possession of Pacileo at Naples (A, *JdI.* i, p. 304: Centaur and phlyax) that it may be Paestan, but that he cannot be certain from the drawing: it is surely Paestan? A calyx-krater in Erbach is early Paestan, by the same follower of the Dirce painter as Copenhagen inv. 9183 (Trendall no. 13: *CVA.* pl. 243, 1): I have a photograph of the back, which shows two women, one with a wreath and a thyrsus, the other with a mirror, as it seems to be: I do not know what is on the front. The plate mentioned by Trendall in note 25 on his p. 15, Reggio 45 from Castelnuovo S. Andrea, whether Paestan or not, is now published in *Dioniso* 7, p. 194, with a mysteriosophical explanation by Dr. Sestieri, who claims that the objects in the phiale are five cosmogonic eggs, and that the personage

is not a phlyax but a Dionysiac initiate assimilating the divine nature. A hydria formerly in the possession of Anton Francesco Gori, figured by Passeri (pl. 57, whence fig. 8) is late Paestan, by the painter of Naples 2585: compare Trendall,



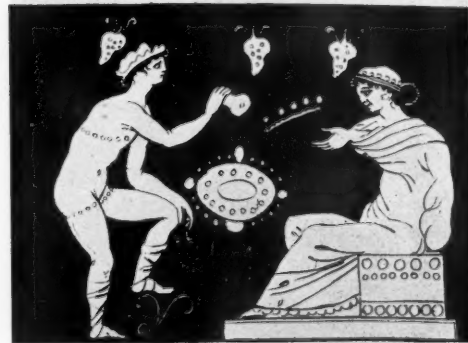
FIG. 7.—AFTER *Sammlung Vogell*, PL. 5, 11



FIG. 8.—AFTER PASSERI, PL. 57



FIG. 9.—NAPLES 2585. AFTER TRENDALL



pl. 35, d (whence fig. 9), and 35, c. As to the Caivano painter, who holds a special place between Paestan and Campanian, I say something about him in an article on Campanian to be published in the *Journal of Hellenic Studies*. I have not seen the vases from Altavilla Silentina, or that in Como, described as Paestan by Dr. Mustilli in *NS.* 1937, pp. 144-5 and 148-9.

OXFORD

J. D. BEAZLEY

ARCHAEOLOGICAL NEWS AND DISCUSSIONS  
NOTES ON RECENT ARCHAEOLOGICAL EXCAVATIONS  
SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN  
CURRENT PUBLICATIONS

STEPHEN B. LUCE, *Editor-in-Charge*

Fogg Museum of Art, Harvard University, Cambridge, Mass.

NECROLOGY

**Walter Ewing Crum.**—The *London Times* for April 22, 1944, gives an obituary of W. E. Crum, who died at Bath on April 20, at the age of seventy-eight. He was undoubtedly the foremost scholar of his time in the field of Coptic studies—"Coptic studies and the name of Crum have long been nearly synonymous." He was educated at Eton and Oxford, and while still an undergraduate developed an interest in Egyptology. After graduating from Oxford in 1888, he studied in Paris under Maspero for a year, going then to Berlin, where he stayed three years, and began the study of Coptic. In 1892, having failed, on medical grounds, to secure an appointment in the Department of Egyptian and Assyrian Antiquities at the British Museum, he devoted his time to research in Coptic studies. The result was his *Coptic Dictionary*, which appeared in six parts, from 1929 to 1939. Other works were his catalogues of Coptic Manuscripts in the British Museum (1905) and the Rylands Library (1909) and the ostraca and papyri in the monastery of Epiphanius at Thebes (1926). In 1931 he was made a Fellow of the British Academy, and in 1937 he was given the honorary degree of D.Litt. from Oxford. He was noted for his charming personality, and his readiness to help, with the greatest generosity, others working in the same field.

**Henry Beauchamp Walters.**—The *London Times* of May 1, 1944, reports the death, on April 24, of H. B. Walters, O.B.E., Keeper of Greek and Roman Antiquities of the British Museum from 1925 to 1932, when he retired. He was seventy-seven years of age, born on April 6, 1867, the son of Ven. W. Walters, Archdeacon of Worcester. Educated at Eton and Cambridge, he entered the service of the British Museum on leaving the University in 1890, so that his entire career was spent with that institution. His specialty was Greek vases, and several volumes of the *Catalogue of Vases* in the Museum are by him; but his best known work, *History of Ancient Pottery*, which

appeared in 1905, was for many years a standard text-book with students of Classical Archaeology, and is of lasting value. Other publications include the *Catalogues* of bronzes, terracottas, gems, and Roman pottery in the British Museum, *The Art of the Greeks* (1906), *The Art of the Romans* (1911), both useful works, and numerous articles in the *Journal of Hellenic Studies* and elsewhere. His hobby was the study of English bells, particularly church bells, about which he wrote several volumes. Scholars visiting the Department of Greek and Roman Antiquities during his tenure of office in the Museum will always remember his courtesy, helpfulness, and generosity in permitting the publication of objects under his care. He is survived by his widow, whom he married in 1898, and by one son.

**Sir Herbert Thompson.**—The *London Times* of May 29, 1944, reports the death on May 26 of Sir Henry Francis Herbert Thompson, Bart., D.Litt., at Bath. In his death at the age of eighty-five "the world has lost its foremost Demotic scholar. . . . Coming so soon after that of W. E. Crum, it means that Egyptology has suffered a double loss." He was born in 1859, the only son of Sir Henry Thompson, Bart., a distinguished surgeon, who died in 1904. Educated at Trinity College, Cambridge, he then studied for the bar, but after some years relinquished a legal career and turned to science. This in turn he was obliged to abandon, owing to serious eye trouble. He had been working in the laboratories at Cambridge, and while there fell under the influence of Flinders Petrie and took up Egyptology. At that time Crum was also at Cambridge, and became one of his closest friends. His first publication, *Demotic Magical Papyrus of Leiden and London*, which appeared in 1904, was written in collaboration with his friend, F. Ll. Griffith. During the next ten years, he published a number of important studies in Demotic and Coptic. After the First World War, he edited the earliest extant copy of St. John's Gospel in 1924, and shortly afterwards compiled a list of the Demotic papyri in the British Museum. His



studies in this field continued up to the end of his life, and he also worked with Crum on the *Coptic Dictionary*. His principal hobby and love outside his chosen field was music. He was unmarried.

**Robert H. Hiller** died on June 13, 1944, at the age of eighty. He was graduated from Wittenberg College, Springfield, Ohio, in 1889, and received the degree of A.M. from Columbia in 1910. After a long term of teaching in secondary schools, interrupted by service at Wittenberg from 1894 to 1897, he returned to his Alma Mater as Professor in 1911, and remained there for the rest of his career as a teacher. Profoundly interested in archaeology, he was instrumental in founding the Springfield (Ohio) Society of the Institute, and in bringing to that city as lecturers, under its auspices, many of the leading archaeologists of this country and Europe. They will remember him as a polished, cultured gentleman of the old type, and a Homeric scholar of no mean ability. S. B. L.

**H. Theodric Westbrook**, General Secretary of the Archaeological Institute of America from 1936 to 1940, died at the home of his family at Kyserike, N. Y., on July 20, 1944, at the age of forty-four. At the time of his death he was Professor of Classical Literature at Scripps College, Claremont, California, a post he had held since 1940. A graduate of Hamilton College in the Class of 1922, he received the degree of A.M. from Wesleyan in 1924, and had studied at the American School at Athens. Before going to California, he had taught at the University of Pennsylvania and at Columbia. Besides his professional interests, he was a poet of promise, his verse appearing chiefly in the *Yale Review*. His widow and a daughter survive, as well as his mother and a sister. As General Secretary of the Institute, he will be remembered for the efficiency, tact, and courtesy with which he conducted its affairs, and particularly for his skill in adjusting the very exacting lecture system that prevailed before the outbreak of the present war. The cordial and harmonious relations now existing between the central office of the Institute and its constituent Societies are due in no small degree to his untiring efforts when in office. S. B. L.

**Louis Jalabert**.—A tribute to Louis Jalabert, S.J. (1877–1943) appears in *MusJ.* xxv, 1942–1943, pp. 143–152. For many years the editor, in Paris, of *Les Études*, he was a life-long student of the Near East, both modern and ancient. While still a young man he held the chair of Greco-Roman epigraphy of the Faculté Orientale de

Beyrouth, and at this time he projected the plan for the monumental *Inscriptions grecques et latines de la Syrie*, of which the first two parts appeared in his lifetime. He was, in addition, a distinguished student of the entire field of Christian epigraphy. To the memoir is appended a list of his archaeological publications. These number 84, although archaeology was but one of his many interests.

## GENERAL AND MISCELLANEOUS

**Genealogical Tree of Modern Science.**—In *Am. Scientist* xxxii, 1944, pp. 135–144, PAUL R. HEYL writes of the debt which modern science owes to antiquity. The oldest civilizations are those of China, India, Egypt, and Babylonia, in all of which, except India, the earliest scientific records are in the field of astronomy. This brought inevitably a parallel development in mathematics. The influence of China on the western world was nonexistent in culture and science till the seventeenth century; nevertheless, Chinese annals contain lists of comets dating back to ca. 2300 B.C., which, on being checked by modern astronomers, prove trustworthy as far back as 611 B.C. They were early acquainted with the length of the solar year, and used astronomical instruments, anticipating by at least three centuries some of the most important inventions of Tycho Brahe (1546–1601). To them are also ascribed the inventions of gunpowder, printing, and the magnetic compass—this last with some reservations. But the western world received none of these things from China. In the case of India, the ancient records are silent on scientific matters, but by 600 A.D. Hindu mathematics had reached a remarkable stage of development, particularly in algebra and geometry. To the Hindus we owe the symbol for zero and the principle of position in numeration, which came to Europe through the Arabs. Egypt was interested in astronomy as the handmaid of religion—but their concern for science was in the practical fields of agriculture, surveying, and engineering, rather than in theory. A papyrus in the British Museum proves that the Egyptians gave little concern to mathematical theory, but were profoundly interested in practical rules for determining areas. In engineering, the Egyptians carried out their work with high perfection and great ingenuity. The methods used by them in construction, and in the transportation and erection of heavy granite obelisks are described. They knew the use of rollers, the inclined plane, the lever, and the

pulley. They had only a rudimentary knowledge of chemistry, but they gave that science its name, which is derived from the Egyptian "Khem" or "Khmi," denoting the fertile part of the land of Egypt. The Arabs took this word, and gave it their usual prefix *al-* *al-Khemi*, "the Egyptian art."

But it is to the Babylonians that modern science owes most. The clay tablets show much knowledge of astronomy. To them we are indebted for the signs of the zodiac, and the identification of the principal constellations. Eclipses of the sun and moon could be predicted. The first "Nautical Almanac," now in the British Museum, was published annually on clay tablets. From them we also derive the division of the circle into 360 degrees, as they had a calendar of twelve lunar months. The Greeks owed their first scientific stimulus to the Babylonians. They did not originate and invent, but developed and perfected what they received. Greek science arose in Ionia, where Oriental influence was strongest, owing to the arrival of Babylonian sages on the Mediterranean seaboard, ca. 650 B.C. A school was founded on the island of Cos, which soon became a center of learning. Its most famous product was Hippocrates, the father of medicine, ca. 450 B.C. Among other developments made by the Greeks was the discovery that iron could be magnetized and attract other iron objects. The heliocentric theory of the solar system was first suggested by Aristarchus of Samos, ca. 250 B.C. Although the greater part of the credit for the origin of Greek science is due to Babylonia, some Egyptian influence undoubtedly exists. To Plato and Aristotle an enormous debt is owed by modern science. Following them, the school of Alexandria is discussed at some length. The great names, of course, are Euclid and Eratosthenes.

We owe little to Rome in science, although they excelled in legal science and in engineering. This is due to the belief of the Romans that all forms of manual labor were degrading. After the fall of Rome, science declined to nothing in Europe, but was carried on in the East by the Arabs, to whom we owe much of our scientific nomenclature. In Europe, after the year 1000, interest in scientific investigation began little by little to reappear. The roots, however, of European science are to be found in the ancient civilizations of Babylonia, Egypt and India: "it is probably safe to say that Babylonia contributed more than Egypt and India together." These contribu-

tions converged on Greece, and from Greece to Rome, and thence to the Arabs, "who were their custodians till the revival of learning."

**Megalithic Monuments in Syria.**—Two kilometers south of the village of Freyké in Syria, along the line of the ancient Roman road from Apamea to Antioch, there is a group of nine megalithic constructions which were briefly examined by R. MOUTERDE, S.J., in 1938, and are described by him in *MusJ.* xxiii, 1940, pp. 109-119. In general they resemble dolmens, but there is no trace of large covering slabs. While there is some variation, the most common plan is that of an oblong chamber, opening to the East, and with the long axis running East and West. In several cases the doorway is protected by two small projecting walls, parallel to the side walls, and forming a narrow entrance corridor. Frequently the whole edifice was surrounded by a low enclosure, generally rectangular and open on the east side. The exact orientation to the cardinal points is noteworthy. There is nothing to indicate that the site was ever inhabited, and the structures were probably tombs.

Another megalithic monument stands to the north of Mengès, a Maronite village of the 'Akkâr. This also is uncovered, but differs in plan, being elliptical, and paved with large flat stones. The threshold is decorated with crosses and other incised patterns.

Similar constructions have been observed in northern Egypt, though it is not certain that these originally lacked the covering stones. However, like those of Syria, they belong to the second dolmenic period. Both sets of discoveries are significant as the first in their respective areas, and as links in the chain of dolmens extending from northern Africa to Persia and the Caucasus.

**Protection of Art in Europe.**—In *College Art Journal* iii, pp. 109-113, SUMNER MCK. CHOSBY gives a brief account of the measures being taken by the United States Government, in conjunction with the other United Nations, to protect and preserve artistic monuments and buildings and other works of art in the countries of continental Europe liberated from, or held by, the enemy. A list of the different Commissions and Committees, with their members, is given, that are working for this end. Various acts of destruction and vandalism, known to have occurred, are listed, together with the systematic looting of museums and churches by the Nazis. To counter-

act this the American objectives are quoted from their own statements. Experts have been commissioned as officers by the Army and Navy, to protect and salvage works of art in occupied areas; maps have been prepared for use by our aviators and ground forces, showing the location of churches, museums, etc., in order to spare their being hit; and a manual for use on the spot has been prepared. Research has also been undertaken to gather material that will help in the restitution of objects stolen or destroyed. It is known that the enemy is much disturbed by these measures; they have engaged in their usual bitter propaganda that we are barbarians who loot as we go; but the occupied peoples now know better.

**Mass Production in Antiquity.**—Under this title, DOROTHY KENT HILL, in *G.B.A.* ser. vi, xxv, 1944, pp. 65–76 (9 figs.) discusses, and attempts to evaluate, the commercial art of antiquity, illustrating her article with objects in the Walters Art Gallery in Baltimore. The test of the rarity of an object, either actual or potential, that should always be applied, is that of technique. If it was made by a reduplicative process, it is certain that others like it exist, or will ultimately be found. Of this type of objects, coins are naturally the most important. "There is no such thing as a unique coin." Coming to other things, terracotta statuettes were being made wholesale in Greece in the fourth century B.C., and also in Etruria, while the Egyptians invented wholesale methods of making bronze statuettes. In the age of Augustus, a factory system was evolved as the result of enormous trade, and "a variety of devices for mass production" was employed, as in the pottery and brick industries. A hint of modern assembly-line methods is given by Horace (*Ars Poetica* 32 ff.) who expresses sympathy for the bronze worker, who made curls and fingernails, but not whole statues! Standardization was perfect, as is shown by the glass industry of Sidon, the output of which is found all over the Roman world. This economic system, the most advanced until our own times, began to die in the third century A.D., very slowly to be sure, both in quantity and quality of output. As a result, the works of the early Greek (before mass production) and early Mediaeval (after the collapse of the Roman economic system) periods are the objects most sought after and prized, owing not only to their beauty but to their rarity. The first of the reduplicative devices was the potter's wheel. Vases decorated in reliefs made

from moulds, within which the vase was thrown on the wheel, are found in Etruscan bucchero, while rolling a seal cylinder on the wet clay was another method. In the fourth century B.C., moulded wares appear in Greece for daily use, and persisted for the next six centuries in Greece and Rome. Familiar types are the Greek "Megarian" bowls, the "Arretine" ware of Rome, the *terra sigillata* wares, and the green glaze ware. Terracotta figurines were mould-made, and by the fourth century B.C. they were made in partial mould-combinations of heads, arms, legs and torsos. Terracotta sculpture on a large scale flourished in Etruria, and was especially repeated in the case of architectural revetments and ornaments. Cast bronze also "suggests duplication" but, although extensively practiced in Egypt, statuettes do not seem to have been repeated to any great extent in Greece or Rome. On the other hand, decorative bronzes, such as vase handles, etc., were produced in mass quantities. Bronze utensils were also mass-made. In the field of personal adornment, the Romans, early in the Empire, used heavy cast objects, thus anticipating us in the use of costume jewelry. Glass was used for gems, and a number of glass cameos exist. With the invention of glass blowing by the Romans, it ceased to be a rarity, and became a great commercial product.

## EGYPT

**Fish in Egypt.**—Although fishing as an occupation was not given an exalted place in ancient Egypt, the fish of the Nile played a very important part in the economy of the country, and their excellence as food was abundantly attested by strangers in the land. As a sport, too, fishing seems to have appealed to the gentlemen of ancient Egypt, if we may judge from the illustrations in Egyptian art; and in the Egyptian pantheon, some fish appear as sacred animals, and were usually not eaten. Three are named—called in antiquity the *Lepidotus*, the *Phagrus*, and the *Oxyrhincus*. The *Lepidotus* has been identified as the *Barbus bynni*, a carplike fish with silvery scales. The *Phagrus* is sometimes identified with the eel, but this is not certain, while the *Oxyrhincus* is the *Mormyrus*. Of mummified fish, only three have been found in any great number, the *bynni*, the *mormyrus*, and the Nile perch. At Mendes the sacred fish was the *Schilbe mystus*, a form of catfish. Another fish identified from Egyptian myths, the *Tilapia*

*nilotica*, or *bolti*, is highly valued as food, both in antiquity and today. Representations of these various fish, particularly the *bolti*, are frequently used for cosmetic dishes, perfume bottles, pendants, and beads. Various examples of the Eighteenth Dynasty in the collections of the Metropolitan Museum are illustrated. Some of the pendants and beads go back still earlier (DOROTHY W. PHILLIPS, in *BMAA*, n.s. ii, 1944, pp. 184-189; 10 figs.).

### MESOPOTAMIA

**Prehistoric Man in Iraq.**—The *London Times* for June 15, 1944, prints a report, accompanied by a map, from SETON LLOYD of the Iraq Museum, of excavations just completed at Tell Hassuna, near Shura in North Iraq, which have added a new and earliest chapter to Mesopotamian prehistory, carrying the story of settled communities back to the new stone age. These people were farmers, and had previously been known only from sherds found in 1931, 100 ft. below the palace mound at Nineveh, giving the pottery the name of Ninevite I. Hassuna provides seven meters of stratified settlements, the latest of which contained Tell Halaf pottery. Each level reveals a village plan, and the appearance of a farming community. The first settlers used only coarse neolithic pottery, and flint or obsidian weapons and tools. A burial at this level gives the earliest human remains yet found in Iraq, and has been taken to the National Museum. The second level is still neolithic, but is marked by house remains, and pottery with painted or incised decorations. It is contemporaneous with Ninevite I. Some of the upper levels run parallel with the painted pottery found by Herzfeld at Samarra, which is now proven to be earlier than Tell Halaf. The lowest level is dated "with no hesitation" in the beginning of the fifth millennium B.C. These discoveries are considered of such importance that, in addition to the report, the *Times* devoted an editorial to them, emphasizing their "high archaeological interest and importance."

### PALESTINE

**Palestinian Excavation.**—A short history of Palestinian excavation is given by M. R. KIRK in *PEQ.*, 1944. The sketch covers the period from 326 A.D. to the present time.

**Sinai.**—A. LUCAS in *PEQ.*, 1944, has an article "The Number of Israelites at the Exodus." This

subject has considerable bearing on the water supply and the food resources of the route taken. He thinks that, if women and children be added to the 600,000 men, the number of persons would be about two millions. For lack of information about the "mixed multitude," he suggests that the expression may reasonably include the women, girls, boys, and very young children. He maintains, however, that the two sets of figures 600,000 (*Ex.* 12, 37-38; *Num.* 11, 21) and 603,550 (*Ex.* 38, 26; *Num.* 1, 46; 2, 32) are impossibly large both for any attainable increase during the sojourn in Egypt of the small number that settled originally in the country (*Gen.* 46, 27) and for the food and water resources of Goshen and the Wilderness. Three facts are cited which do not agree with the large numbers: only two midwives for all Israel (*Ex.* 1, 15); for a while Moses settled all important disputes in the whole community (*Ex.* 18, 13-18); and the total of non-Levite first-born male children was only 273 (*Num.* 3, 46).

The large numbers are paralleled by the results of a second census taken at Shittim 40 years after the first (*Num.* 26, 51); the total was 601,730 (i.e., 1820 less than in the first census). This loss is explained as due to casualties in war, the rebellion of Korah, and plagues. There is no doubt that the two sets of figures are deliberate and are not due to a copyist's error. It has been suggested that the high numbers represent a census taken after the settlement in Canaan; but there is no evidence of such a census, and while that theory may plausibly explain one list, it can hardly be the source of the two. Another suggestion is that Hebrew *'elep* (thousand) in this connection means "family" or "clan." With this interpretation the first census would mean 598 families with a total of 5,550 men, and the second 596 families with a total of 5,730 men. But since these refer only to the fighting men over twenty years of age, exclusive of the Levites, the whole number of Israelites would have been many times these figures. Reckoning five times these numbers, we should have 27,750 and 28,650 respectively. Lucas thinks that even though these figures are a great reduction on 603,550 and 601,730, they are still too high.

Against the high numbers of the O.T. narrative Lucas refers to the total of seventy that came to Egypt. From 1907 to 1937 the average of increase of population in Egypt has been 11.69 per 1,000. By the same rate of increase the original seventy of the Israelites would have become



10,363 at the end of 430 years. He also states that the population of the Administrative Division or Province of Sinai from the Mediterranean Sea in the north to the apex of the peninsula in the south was only 15,058 in 1927 and 29,951 in 1937. His conclusion is that the country could not possibly have furnished sufficient food or water for the large number of Israelites given in the Pentateuch.

**Jerusalem.**—E. L. SUKENIK and L. A. MAYER report (*PEQ.*, 1944) on the excavation of a new section of the Third Wall of Jerusalem in August, 1940. The American School of Oriental Research had part in this excavation, and some of the digging took place on the road passing by this institution and also within its enclosure. Of special interest was the foundation of a tower unearthed near the American School. The new section which has been uncovered has added 265 metres of length to the course of the Third Wall.

**Shebaniah and Shebna.**—A. M. HONEYMAN, in *PEQ.*, 1944, discusses the proper names Shebaniah and Shebna. By equating Hebrew *šāban* with Arabic *ṭabana*, he concludes that these names mean "YHWH has borne on his bosom."

**Scythopolis.**—In *PEQ.*, Jan.-April, 1944, STELLA BEN-DOR writes concerning the era of Nysa-Scythopolis. Coins of Scythopolis began to be struck in the time of Nero, and they are dated according to a Caesarean era starting in 47 B.C. On the basis of coins dated from A.D. 175 to 304 we know that the Pompeian era reckoned from the year 64/3 B.C. was also in vogue, and the conclusion reached is that the change from the Caesarean era to the Pompeian took place in the period between the reigns of Nero and of Marcus Aurelius.

**Napoleon's Map of Palestine.**—D. H. KALLNER has an article in *PEQ.*, 1944, on the map made by Col. M. Jacotin, the director of the French Military Survey Corps in Egypt in 1799. Napoleon intended to extend his Oriental conquests into Palestine and Syria, and started the Palestine expedition which took place from February to June, 1799, and eventually failed in the unsuccessful siege of Acre. Jacotin's map is the first modern map of Palestine, based on an instrumental survey.

## SYRIA

**The Lebanon.**—A very interesting paper on this part of Syria, by Flight-Lieutenant W. B. FISH, appears in *Geog. Rev.* xxxiv, 1944, pp. 235-

258 (15 figs.). (A brief biographical sketch of the writer will be found in *ibid.* pp. 319-320). After some introductory remarks on the formation of the modern Lebanese state, the article deals with (1) Relief and Structure, (2) Climate and Vegetation, (3) History and People, (4) Religious Grouping, (5) Ways of Life, (6) Emigration, (7) Agriculture, (8) Industry and Trade, (9) The Problem in Summary. For readers of this JOURNAL, the earlier sections are of the greatest interest. Behind the coastlands, the country consists of two parallel ranges of mountains, separated by a long, flat valley, the ancient Coele-Syria. The most important rock formation is Jurassic limestone, which restricts the water supply, reducing human settlement; on the other hand, the formation known as Nubian sandstone will retain water that seeps through limestone, and yield springs which irrigate wide areas, as around Beirut, and the foothills of the Central Lebanon. The conformation of the region is of the utmost importance in its human geography, and accounts for the presence of large groups of Christian refugees who fled from Moslem persecution and established themselves in relative safety in Central Lebanon. The discussion of the climate reveals sharp variations in temperature, from the semi-tropical coast to the cold winters and hot summers of the eastern part, yielding a wide diversity of agricultural produce, from bananas and citrus fruits to wheat, barley, millet and Indian corn. The famous cedars of Lebanon have nearly all been destroyed, causing much soil erosion on the sides of the mountains. Coming to Lebanese history, the country first appears under the Phoenicians, when Tyre and Sidon, on the coast, attained their supremacy in trade; but the writer points out that it has nearly always been tributary to foreign conquerors, and calls attention to a remarkable series of commemorative monuments existing near Beirut, beginning with an Egyptian stele of the thirteenth century B.C., and ending with an Allied tablet of 1942, providing a graphic epitome of Lebanese history. It achieved its highest development under the Romans, as is witnessed by the multiplicity of Roman remains. At that time Tyrian purple was its principal export, but the law school of Berytus (Beirut) was famous in antiquity, and the temples at Baalbek are still the supreme monuments of the country. Passing into the hands of the Arabs in 635-640, the country was subjected to fanatical Islamic proselyting, and large numbers were



converted. Arabic then became, and still remains, the universal language. In the period of the Crusades, parts of the coast remained in Latin hands for nearly two centuries. The final expulsion of the Crusaders was in 1291, but they left a permanent reminder of their sway in the superb castle of Krak des Chevaliers. After them the country was torn by opposing Moslem sects, of whom the Druses were the most powerful, and under whose emirs some independence and prosperity was attained. French interest in Syria and the Lebanon dates from the Dark Ages, when the French kings made themselves protectors of the Maronite Christians. This was first recognized by Harun-al-Rashid in the ninth century, and has steadily been maintained. There is no special Lebanese ethnic type, owing to intermixture of the diverse elements that have occupied the country, but religious differences are sharp, and politics and religion are one and the same; perhaps the most important political figure is always the Maronite patriarch, who is nominally in communion with Rome. The rest of the article deals with modern conditions, except that it is pointed out that emigration from the Lebanon is no new phenomenon—it existed in the Phoenician days of Tyre and Sidon.

**Syria and Lebanon.**—In *MusJ.* xxv, 1942–1943, pp. 21–79, RENÉ MOUTERDE, S.J., discusses a number of monuments and inscriptions of Syria and Lebanon.

1. Although no excavations have been made on the site of ancient Berytus, chance discoveries permit the approximate identification of the area of the Forum. The monuments are: a large base dedicated to the Genius of the colony, an inscription recording the restoration of some public buildings by Queen Berenice and King Agrippa, and an inscription listing the benefactions of Vespasian or Titus, including *taber[nas]* and a *signum Liberi Patria*. This statue cannot be identified with the statue of Marsyas shown on coins of the time of Elagabalus, as du Mesnil thought, but in any case would have stood in the Forum. The building in front of which the statue of Marsyas stands, on the coins, was probably the gateway to the Forum. Several large columns found near the Great Mosque may belong to this gateway.

2. Two fragmentary inscriptions of Beirut, one of the fifth or sixth century, the other of the sixth or seventh, are parts of an Imperial tariff, a *τέλος ἑκατοστάριον*. The word *ἑκατοστή*

seems to have undergone an evolution in meaning similar to that of the Latin *centesima*, so that the tax was in reality a levy of 12½%.

3. More than 100 inscriptions of the Emperor Hadrian found throughout the Lebanese forests mark the importance of the imperial monopoly on four kinds of trees, doubtless those valuable for ship-building. An unpublished inscription clears up a remaining obscurity in the abbreviations used, and shows that some at least of the inscriptions date from the year 134. This royal prerogative long antedates the Roman rule. In an appendix, PAUL MOUTERDE discusses the trees of Lebanon, and identifies the *arborum genera* iv as *Cedrus Libani* Barr., *Abies Cilicia* Carr., *Juniperus excelsa* Bieb. (perhaps classed with *Cupressus sempervirens* L.), and finally either the *Cupressus* or *Pinus pinea* L.

4. A third-century votive altar of Bosra records a dedication of the *Thysdritani* to Mercury, later identified as the *genius coloniae*. The colonia is surely Thysdrus, in Tunisia, and this dedication made in the chief town of the Roman province of Arabia can be explained on the assumption that the Thysdritani, doubtless an official delegation, had come to purchase grain at some season of scarcity. Bosra is still the grain center of the Hauran.—An *Ocibocus* named in an epitaph of Bosra seems, by his name, to be of Dacian origin.

5. A new interpretation is proposed for the mosaic published in 1905 which shows the river-god Euphrates flanked by two feminine figures. A graffito of Dura mentions the Tyche of the Euphrates, and Mouterde identifies the group on the mosaic as a typical Syrian triad: the goddess with a mural crown is the consort of the river, Mesopotamia, the one with a cornucopia is Tyche, corresponding to Simi, sometimes the daughter of Hadad in the Syrian triad. Ronzevalle proposed to interpret the graffito itself as a series of acclamations.

6. The base of a statuette of the Syrian Jupiter, with reliefs on each of its four sides shows the process of adaptation of Greek myth to Syrian cult purposes. The central figure seems to be Leukothea, with whom the other Greek figures, Herakles, Asklepios, and Hygeia (?) all have some connection in Greek cult or myth. However, Leukothea of the cults of Antilebanon is clearly an Atargatis, goddess of vegetation and protectress of the vine. The monument may come from Leucas Balanea.

7. A lead weight found at Tyre, with caduceus and dolphin crossed, must belong to a maritime and commercial city. The inscription names this as Demetrias of the Moandeis, a place not otherwise known. The Hellenistic name would date from the time of Demetrius Poliorcetes; the native name appears Anatolian. A plausible identification is with the Myanda in Cilicia named by Pliny.

8. An unpublished coin of Tyre, of the third century of our era, bears the legend: "Europe, priestess of the Ambrosian Rocks." The representation is similar to that on a bronze of the city, of about the same period, and marks an effort on the part of the Tyrians to associate with their own traditions the famous goddess of their rival, Sidon.

**Palmyra.**—The Abbé JEAN STARCKY has produced an archaeological guide to Palmyra which appears as *MusJ.* xxiv, 1941. The 70-page work has also been published, minus the index and supplementary notes, in another format, of which an English version is promised. The author was able to consult such outstanding experts as Seyrig, Mouterde, and Amy, and had access to the photographic collections of the Service des Antiquités and the Université Saint Joseph. The introduction contains a brief historical sketch, an account of the exploration of the site, and a selected bibliography. The work is replete with brief but authoritative notes on the historical, artistic, and religious significance of the monuments. There are 60 illustrations and a specially prepared plan.

**Archive Seals in Roman Syria.**—The seal impressions from Doliche, first edited by Ronzevalle, eventually reached the Cabinet de France, where by good chance there were already others, obviously of the same provenience. These, together with other lots found at Alexandretta and Palmyra, plus two isolated seals from Nicopolis-Islahiye form the basis of a study by HENRI SEYRIG, in *MusJ.* xxiii, 1940, pp. 83–107, of the seals of public archives in towns of Roman Syria.

Of the 69 impressions from Doliche nearly a third are private seals. The remainder, on which are found divine or imperial images, sometimes with an inscription giving the name of the city, are of fifteen types. Particularly noteworthy is that which Seyrig interprets as the Castores Dolicheni, whose significance and importance he discusses. Seyrig and Ronzevalle differ in the interpretation of one type, that showing a Roman

general and a figure in native costume clasping hands over an altar. Ronzevalle saw in the native figure Zeus of Doliche, whereas Seyrig prefers the view that both figures represent mortals, probably a Commagenean prince confirming an alliance with Rome.

The bulk of the seals found at Palmyra and Alexandretta were private, in the latter case 865 of 880. The public seals of Palmyra all represent the Tyche of the city. Of the Alexandretta impressions one representing the city's founder, Alexander as Herakles, is surely the municipal seal. Several, with religious subjects, are probably priestly seals, two are probably imperial, and the remaining four may be the seals of provincial governors.

The seals of all four cities have one feature in common, a groove formed by the cord which served to tie the document. Seyrig explains the technique employed in affixing these seals, and concludes that the documents so preserved were contracts. These would bear not only the public seal, but also the private seals of the contracting parties and of the witnesses, a fact which explains the greater number of private seals found.

Inscriptions of Palmyra mention an "archives building," doubtless located at the spot where the seals, and the ashes of the documents they guarded, were found. The building must have been fired during the sack of the city in 272 A.D.

Of the public seals of Doliche one, the most common, seems to be the official municipal seal, while several others are perhaps sacerdotal. The two political seals depicting the scene of alliance may have been used to record the payment of a municipal tax on this class of documents, and the imperial seals may have done the same for some imperial tax.

The disproportion of private and public seals in the find at Alexandretta suggests that we are not here dealing with the municipal archives, but with some other collection, perhaps pertaining to the administration of imperial properties.

**Cults of Hierapolis.**—An important contribution by the late S. RONZEVALLÉ, S.J., to our knowledge of the cults of Hierapolis-Bambyce appears in *MusJ.* xxiii, 1940, pp. 1–82. The paper, originally written in 1922, owes its present form to the devoted work of the editors of the journal, who have added the more recent documentation and completed certain sections.

The first chapter is a description, with commentary, of ten coins of the dynasty of 'Abd-

Hadad, of Hierapolis. Four of these are in private collections, and had not hitherto been published. Their evidence establishes: (a) Manbog as the Aramaic name of Bambyce; (b) the indiscriminate use of 'Atā and 'Atar-'Atā as the name of the consort of Hadad, a fact which excludes the possibility of equating 'Atā, in the compound name, with Attis; (c) the existence of the divine name Haddān as a variant of Hadad, perhaps the form which gave rise to the Canaanitish Adon; and (d) a variant of the name of the goddess which lacks the initial guttural and is the prototype of the Greek form Derceto, used by Ctesias.

The iconography of the gods is treated in the next section. The coins reveal Hadad, not in his local effigy, but as Ba'al-Tarz, the general type of Hellenic Zeus so widely used. Atargatis too appears in Hellenic guise—the "Arethusa" type—but is also represented by three indigenous types: (a) crowned, with her hair falling in two long plaits, as on the gold plaque of Karak Nouh, and accompanied by the solar disc and lunar crescent; (b) with a prominent curl on the forehead, and a long pendant at the back of the head, both elements drawn from Aegean art of a much earlier period; and (c) veiled and seated on a lion.

In the third chapter Ronzevalle discusses the problem of nomenclature. 'Atar, derived from an older 'Attar, is the Aramaic form of Ištar-Astarte, and appears in Greek as Ἀθάρα. 'Atā likewise is Aramaic. The compound name is attested for the fifth century, but probably does not go back as far as the eighth. Does the compound represent the fusion of two goddesses, as Albright has maintained? On the contrary Ronzevalle insists that both elements refer specifically to the one goddess, but that 'Atar, like certain other Semitic divine names, came to be generalized with the sense of "goddess," while 'Atā remained the real proper name of the consort of Hadad; both elements are found in theophoric names. The compound name, 'Atar-'Atā, Atargatis, "the divine 'Atā," probably arose at Hierapolis as a special mark of reverence and affection. A reflection of this usage is seen at Delos in the epithet ἄγνή, applied there to the Syrian goddess. However, at the end of the fourth century the local coinage still used, without apparent distinction, either 'Atā or the compound, and it was probably not till the third century, with the increased prominence of the cult under Seleucid patronage, that Atargatis came to be the current designation, among foreigners, of this goddess.

Of the native representations of Atargatis, (a) depicts her as the queen of the heavens, while the veil of (c) indicates her status as consort and the lion her warlike and protective aspects. The Egyptians had likewise indicated these two aspects of the Syro-Canaanitish goddess, under the names of Qadeš and 'Anta (= 'Anat). Not only is there no connection between 'Attā-'Atā and the Anatolian Attis, but all lines of investigation tend to confirm the view, put forward long since by de Vogüé, that she is identical with the old Semitic goddess 'Anat.

A final chapter briefly classifies the coins of Hierapolis. Two and possibly three dynasts are named, but all are apparently of the period after 312 B.C.

A number of related topics are treated in a series of appendices: a gem depicting Ichty; the name Atargatis Bethennynis (*P.Oxy.* 1449), which Ronzevalle interprets as *beit hannoün*, "house of the fish," τόπος ἰχθύων, not only referring to the sanctity of fish in the Syrian cult, but especially appropriate here, in the town of the fish oxyrhincus; the appearance of 'Anat at Delos, under the title Ἀνατράμ[ι?], and possible relationship of the second element of this name with that of Semiramis; and finally a collection of seal impressions from Doliche.

**Atargatis.**—Atargatis was frequently called *Dea Syria* abroad, but in her native Syria she regularly received her proper name. However, a Latin dedication to *Dea Syria Nihathe* has recently been found at Niha, near Baalbek. R. MOUTERDE, S.J., discusses this and several other monuments in *MusJ.* xxv, 1942-1943, pp. 135-142. The word Nihathe evidently contains the still-surviving name of the locality, and is best interpreted as a genitive, Nihath(a)e.

Not only the name, but the figured representations of Atargatis felt the influence of Rome, to judge by a crude statue belonging to a private collection. This comes from the Hauran or the Djebel Druze; parts of it may be modern. The goddess, whose throne is flanked by lions, holds a spindle in her left hand; the globe resting on her knees is therefore, if ancient, intended as a ball of wool. She wears a breast-plate and helmet, and while Atargatis was from remote times a warrior goddess, the local artist was probably influenced in his choice of this military attire by the presence of a Roman colony or garrison. Similar in technique is another statue from the same collection, found near Damascus, which

represents Herakles and, probably, Alkestis. An inscribed funerary stele of Niha is also included in the article.

**Relief in Beirut.**—The figure on a much worn relief in the Musée de Beyrouth can be identified, thanks to coins issued under Trajan and Macrinus, as the Astarte Polias of Berytus. She wears the calathus; her right hand, raised, rests on a *stylis*, while her left hand lifts her robe so that she may step up on the prow of a ship. On one side a Victory offers her a crown, on the other a Cupid offers either a crown or a mirror. An article in *MusJ.* xxv, 1942–1943, pp. 11–20, based on notes left by the late S. RONZEVALLE, S.J., provides us with the material relevant to this representation of the goddess, which is clearly derived from a cult image.

The figure of Cupid is probably intended to recall the official Roman name of the city, Colonia Julia Augusta Felix Berytus, and the traditions of the gens Julia, as well as local traditions that Berytus was the birthplace of Eros.

Astarte appears as the goddess of navigation on the coinage of almost all the Phoenician towns, but she is a composite figure, not a wholly new conception like the Tyche of Antioch. The names and attributes of Greek divinities were superimposed upon the ancient "Lady" of the Semitic towns. The mural crown of Tyche is a frequent attribute on the coins, but the *stylis* as a symbol of maritime power is anterior to Alexander. Further, the variation in headdress between the coins and the relief suggests that this feature might be changed to suit the order of festivals. The appendages flanking the calathus on the relief may be horns, an old symbol of power, but are more likely to be a stylization of the plumes of the *atef* of Isis, who was often identified with Astarte.

In a further note are described two badly damaged reliefs from Deir el-Qal'a. The goddess, attended by two worshippers, on one of these, is probably the consort of Ba'almarqod, named in our documents Juno Regina. On the other the bust of a goddess, who wears a low cylindrical tiara and is flanked by two birds, can be compared with the image of Astarte of Berytus on the coins of Gordian III. On the coins the birds are the legionary eagles, but their appearance on related monuments shows that the Astarte of Berytus, like her consort Poseidon, had received solar attributes.

**Basalt Lintel.**—A small basalt lintel from Si'a

in the museum of Soueida (Djebel Druze) is discussed by A. BEAULIEU, S.J., in *MusJ.* xxv, 1942–1943, pp. 129–134. On the maladroite relief a man presents, with his raised left hand, a disproportionately large bucranium, while his right hand holds the bridle of a horse, which in turn is followed by a goat and a dog. The motif of the presentation of the bucranium appears on a number of monuments, and is clearly intended to record the sacrifice of a bull by the person represented. The horse, goat, and dog on the present relief serve to indicate that the dedicator is no simple shepherd, but a man of property.

**Magical Objects.**—In *MusJ.* xxv, 1942–1943, pp. 103–128, R. MOUTERDE, S.J., presents a catalogue of the S. Ayvaz collection of magical objects. The 61 items come from Aleppo, Antioch, Lattakia, Beirut, Damascus, Hama, and Homs. The extensiveness of the collection emphasizes the fact that little or no trace of this Graeco-Roman magic, permeated with Egyptian symbolism, has been found to the east of this area. The objects, amulets, gems, and plaques, are arranged under four main classifications, amulets against specific diseases, those with the images of Greek and Egyptian gods and sacred animals, objects from the Iao-Abasax cycle, and Christian amulets. There is a convenient index.

**Miscellaneous Inscriptions.**—J. MECERIAN and R. MOUTERDE, S.J., publish in *MusJ.* xxv, 1942–1943, pp. 87–101, a number of inscriptions and several reliefs from the region of Amanus and from Seleucia. Worthy of note are: 2. a dedication to Zeus Ombraros made by an officer of the Legio III Gallica in the third century, probably while this legion was en route to Gaul; 3. the epitaph of a veteran of the praetorian fleet; 4. a boundary stone which helps in the determination of the site of Χάραξ Μελεάγρου; 8. the record of a contribution for a portico τῶν ὀπολ(ων) εἰ θεῶν, an unusual form of the *sive deo sive deae* formula; and 12, the epitaph of a τερμοστήρ, a functionary hitherto known only from the arbitration proceedings between Corinth and Epidauros (*Syll.*<sup>3</sup> 471).

## GREECE

### GENERAL AND MISCELLANEOUS

**Colophon.**—LEICESTER B. HOLLAND gives an extended report in *Hesperia* xiii, 1944, pp. 91–171, of excavations carried on at the site of the Ionian city of Colophon. Located south of Smyrna, where the foothills of the ridge of the Sivridağ



form the boundary of the plain, Colophon is marked on the northeast side by the mill stream Değirmendere, while a second stream rising on the south, the Kabaklı-dere, flows through the center of the site. In the fourth century B.C. the circuit walls of the city linked three hilltops, approximately a kilometer apart, forming an equilateral triangle, with its apex to the north. The site was found by Schuchhardt, Kiepert, and Wolters in 1886, who traced the circuit walls of hard blue-grey limestone. A dozen towers were located, mostly round. Within the walls terraces and foundations were observed but no superstructures. In 1922 the Fogg Art Museum of Harvard in collaboration with the American School of Classical Studies at Athens planned an extensive campaign, and the first expedition under Dr. Hetty Goldman and Dr. Carl Blegen worked at the site. No attempt was made to analyze the city walls laid bare by Schuchhardt, but trials at various places for exploratory purposes were made in the valley, on the acropolis hill, and in the three cemeteries. Specific results were the determination by means of coins that the site was indeed that of Colophon, the coins for the most part coming from Colophonian mints; secondly, that the city was inhabited from prehistoric times through the classical era, three cemeteries of Mycenaean, Geometric, and Hellenistic periods being identified; and finally, that on the acropolis at least there was no habitation after the fourth century of any importance. A second expedition of 1925 under Dr. Goldman resulted in a more careful excavation of the Metroön (not published in this report) and the bathing establishment of the city. The valley within the triangle of the city's fortifications revealed on superficial exploration traces of a large number of buildings, three of which, being of a size more suitable for public than for private structures, would seem to indicate that the center of the community was nearby. The stonework is Greek, and from its appearance could be placed in the late fourth century. Of the three hills that form the apices of the city, that to the southwest was the acropolis, a long ridge stretching from the high mass of the Sivridağ. It rose some 200 m. above the plain. The wall which made the acropolis independent of the main city ran from the summit along the east side of the highest ridge as far as a saddle, where it descended nearly to the Kabaklı-dere. It could not be traced on the northern and western sides. Within the ring of

the acropolis the area was undoubtedly filled fairly solidly with buildings and streets and public places, and so, except for the cemeteries and trial trenches in the lower town, described above, digging was confined to the acropolis. The wide level terrace which prolongs the ridge to the north on the lower part of the acropolis hill was excavated. It became evident that the center of the terrace had not been built upon at all, but had remained an open plateia, flanked on the north and west by an impressive stoa, shaped like the letter L, and filled with shops or public offices. The stoa was excavated in two sections, that at the south half of the west flank being wholly uncovered and surveyed in connection with the houses on the west terraces. That part at the north of the plateia was not surveyed, but was carefully recorded, together with the houses on the northern front of the terraces. While the stoa was unified in conception and probably all built within a short stretch of years, it was not all built at one time. The northern wing shows two distinct sections, of which the western section consists of a portico about 5.70 m. deep, behind which were five rooms; the eastern section comprised a large room, 10.35 m. x 12.80 m., flanked by two smaller rooms. The wing of the great stoa which bounds the plateia on the west was likewise built in sections, with a row of chambers constructed behind the colonnade and antedating it. The second chamber from the south showed a curious group of interior foundations, perhaps used for purposes of storage, or as a treasury of the sanctuary of the Metroön.

The constituent elements of the house are remarkably clear at Colophon. It was a roomy, non-commercial city, free from condensation as found in Priene, and the complexity of paved courts, colonnades, and reduplicated chambers which occurs at Delos has not been reached. Here elements such as might well be found on a farm as in a city occur, set openly about a yard rather than coalesced into a unified structure around a central court. The first element is the house proper with the main living room and workroom for the mistress, preceded by a porch or *prostas*, open to the south. Attached were two chambers, the *thalamos* of the master, and a chamber for other members of the family or guests, entered from the *prostas*. The second element is the isolated two-storied structure. The lower room was evidently the room where friends of the master were entertained; the upper room



seems to have been the *gynaikonitis*. Of minor dependencies, the shed probably served for stables and servants' quarters, storerooms and possibly kitchens. Wells are a usual feature of the houses at Colophon. Of such a type is the eastern house iv, located west of Street D, and west, in turn, of the great stoa.

It is clear from the excavations at Colophon on the acropolis hill that it was a prosperous settlement of the fourth century with residences, public buildings of various kinds as well as semi-public enterprises such as shops, inns, and baths. There was one large public square, at least one prominent sanctuary, dedicated to the mother goddess, Antaia (located southeast of the stoa), but whether the sanctuary is incidental to the settlement or all the settlement is an appendage of the sanctuary is not certain. It is certain that the whole complex came into being in the fourth century and that after a generation or two reached a sudden end by the forcible transfer of the Colophonians to Ephesus. From an inscription found in the Metroön in 1922, it is evident that the city of the fourth century on the acropolis is distinct from the "ancient city" and an "ancient marketplace." The most likely site of this "ancient city" is a long ledge of rock to the north of the acropolis, the western end of which drops almost vertically to the Degirmendere. Other possibilities are the lower levels of the acropolis or a site outside the line of the Hellenistic walls, somewhere on the Traca çay, southeast of the acropolis, for the city of the fifth century.

**Tent of Xerxes and Greek Theater.**—In *Univ. Calif. Publ. Class. Arch.* i, 1944, pp. 305-311, OSCAR BRONEER speaks of the tent of the Persian commander-in-chief, which fell into the hands of the Greeks after the battle of Plataea, with its magnificent equipment as described by Herodotus. This tent was none other than the royal establishment left behind by Xerxes in his flight after Salamis. There is no information as to what became of the royal tent after the battle, but the writer believes that it was set up in some Greek city, and probably put to some practical use. Broneer suggests that the tent played an important role in the development of Greek scene-building, as the rise of the Greek theater was one of the creations of the time of the Persian Wars. Tents were used for presentation of dramas into the fourth century, as is shown by Plato and other writers, and the tent of Xerxes doubtless suggested the palace architecture of the Near East.

By drawing back its curtains, interior scenes could be managed. By tradition it is connected with the precinct of Dionysos, and thus indirectly with the theater. The Odeum of Pericles is said to have been built in imitation of the tent of Xerxes, and according to another tradition, the salvaged masts and yard-arms of the Persian ships were used as rafters in the Odeum. Broneer agrees with O'Neill (*CP.* xxxviii, 1942, pp. 425-427) that these masts and arms were first used in the presentation of the *Phoenician Women* of Phrynichus in 476/75 B.C. The attribution of the Odeum to Pericles is open to question, and the suggestion is made that it had some direct connection with the defeat of the Persians. The Odeum was part of a larger complex of which the Theater was the most prominent member, and which originated in the fifth century. The scene building which formed the background to the plays had the name σκηνή, tent—a word originating in the early fifth century—Homer's word for tent is κλισίη, which after the fifth century takes the meaning of hut. Σκηνή may well be a word of exotic, and specifically Persian, connotation, as Persian tents were famous in classical times. It is therefore suggested that in this same performance of *The Phoenician Women* the tent of Xerxes was used as a background, and thus formed the prototype for the permanent scene building. This might also account for the tower-like wings, or παρασκήνια, as a further imitation of Near Eastern architecture. As the tent was no mere shelter for the King alone, but had quarters for retainers, a banquet-hall, a kitchen, etc., it would doubtless have been built to imitate the permanent palace at Susa. There is no formal proof for the theory connecting the scene-building of the Theater with the tent of Xerxes, but there are strong probabilities which support it. The word σκηνή first appears in Greek literature in *The Persians* of Aeschylus, and became the common designation for a military tent about the time of the Persian invasion. Both in shape and in its temporary construction the tent lent itself well to theatrical requirements. The form of the later stone construction shows a striking resemblance to Persian palace architecture.

**Hellenistic Gems.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 61-69, DOROTHY KENT HILL discusses the technique of gem-cutting as illustrated by several fine pieces recently acquired by the Gallery. By the Hellenistic

period the art of gem-cutting had reached technical perfection. Especially remarkable is the feeling of depth, the third dimension, which the artists were able to achieve, working as they had to in reverse on the intaglio with drills and points to produce the plastic modelling of the wax impression.

### SCULPTURE

**Polychromy in Greek Sculpture.**—This subject is discussed by GISELA M. A. RICHTER in *B.M.A.* n.s. ii, 1944, pp. 233–240 (6 figs. and supplement of 4 colored plates). See article in this issue of the JOURNAL.

**Seleucid Art at Antioch.**—The scarcity of Seleucid art at Antioch gives added interest to works of the period found in neighboring areas. A fragment of a round base, from the region of Alexandretta, is published by RENÉ MOUTERDE, S.J., in *MusJ.* xxv, 1942–1943, pp. 1–9. It is badly worn, but the six female figures can readily be identified as Muses; the missing portion of the base would have accommodated the remaining three Muses and perhaps Apollo Musagetes. It is more difficult to identify with certainty the individual figures, apart from Urania. All are similar in dress, and this, together with the proportions of the body, and the fact that, in general, the individual Muses have not yet acquired distinctive attributes and characteristics, points to a date at the end of the Hellenistic period, in the first century B.C.

Two of the Muses hold the long-necked *pan-douros*. The high popularity of this instrument is usually assigned to the Imperial period; it appears, for instance, on a sarcophagus in Naples of the early third century. However, it had long been popular, notably in Syria, where it perhaps originated, and its appearance here seems thoroughly consonant with local usage of the first century B.C. The Syrians were notoriously fond of music, there were many shrines of the Muses in this area, and a neighboring mountain had been renamed Pieria by the Macedonian conquerors. It is natural therefore that the Pierian Muses should be represented in the guise and with the instruments of a local orchestra.

### VASES

**Corinthian Amphora.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 105–109, DOROTHY KENT HILL publishes a Corinthian amphora which has been loaned to the gallery by Mr. Rob-

ert Garrett. It was found at La Tolfa in Etruria, and is of unusual size, being seventeen inches in height. The decoration consists of floral ornaments on the neck, rays on the foot, and five bands of animals on the shoulder and body, the field filled with the usual rosettes. The piece is dated in the Early Corinthian period, ca. 625–600 B.C.

**Hearst Hydria.**—In *Univ. of Calif. Publications in Class. Arch.* i, pp. 241–290, pls. 33–37, H. R. W. SMITH contributes a study of a very important vase in the collection of Mr. William Randolph Hearst at San Simeon, with the subtitle, "An Attic Footnote to Corinthian History." The article is in two parts; the first (pp. 241–253) deals with the style and date of the vase; the second (pp. 254–266) is entitled, "Archaeology and the Date of the Kypselids." The remainder of the paper consists of notes to the text (pp. 267–277), the plates (pp. 279–284) and an Index (pp. 285–290). The vase is an Attic hydria, and was formerly in the Thomas B. Clarke collection, dispersed in New York in 1899. It was said to have been found at Camirus, Rhodes. It is one of the earliest vases of its shape known, and its narrow mouth makes it what Smith calls a "dip" hydria. In the design of birds and sirens on the shoulder there is marked Corinthian influence, which is even more pronounced in the lowest zone of animals, although in this case there has been some restoration, which confuses the question. The Corinthian influence is of the Late Corinthian technique. It is therefore obvious that the vase is Corinthio-Attic (Smith rejects, for very good reasons, the term "Attico-Corinthian"). In the human figures on the shoulder, the stance is Corinthian, the drapery Attic in type. As a result of these criteria, and by very close reasoning, Smith reaches a date for the vase late in the second quarter of the sixth century. This brings up the question of its relation to the Lydos group, to which it does not belong, to be sure, but "near which it seems to stand." A clue may be found in the palmette-lotus decoration of the front strip of the handle zone, which is typical of, though it existed before, Exekias, and a close scrutiny of this, in connection with the other criteria, confirms the mid-sixth century dating. But the syntax of the hydria, with its designs in friezes instead of panels, is disturbing; and the shape, too, is earlier than any of the extant complete hydriae of the Lydos group. But one sherd signed by Lydos (Louvre F29), which is defi-

nately from a hydria, shows that the vase of which it was a part had a frieze decoration, and was of similar shape. Furthermore, there is enough of the design remaining to place it in Lydos' middle period, and to make it perhaps the latest of his extant hydriae. Consequently the date of 560-550 B.C. stands, with the probabilities favoring the latter years, as Smith proves on evidence afforded by Rhodian tomb-groups, and their relation to the Arkesilas kylix, dated about 565 B.C.

The second part of the article depends upon the first. If the dating reached above is correct, it will throw some light on the chronology of the tyrants of Corinth. The prosperity of the Corinthian potteries must have owed much to the social policies of Periander, while the pattern of commercial distribution of Corinthian vases doubtless bears some relation to the traditional reports of the foreign policies of the tyrants, particularly the superabundant finds of pottery of the First Late Corinthian period on Western sites. Smith points out that Payne hardly mentions Periander in his great book on Corinthian art; he does not impugn Payne's chronology, but shows that it needs confirmation. The date of Periander's death has been placed as early as 590 B.C., and as late as 535. A clue would be the imitation of Corinthian styles by other potteries; with a failing supply and a steady demand, customers could be satisfied with substitutes made elsewhere. Smith believes that this accounts, for instance, for the rise of Chalcidian ware, which is dated about 550, at which time Payne believed that Corinthian black-figure "abruptly" ended. This is the approximate date of the Hearst hydria, and is thirty-four years below the recorded ("Apollodoran") date for the fall of the Kypselids, in 584. Herodotus, on the other hand, makes the reign of Periander in Corinth overlap the tyranny of Peisistratos in Athens, which would have him still on the throne in 560. This Herodotean chronology is admittedly hard to reconcile with the Olympic victor lists, and with the chronology of Aristotle and Apollodorus, but a solution is suggested, although not insisted upon. A curious phenomenon is the decline of export of fine pottery to Rhodes in the Late Corinthian period, while exports to Italy and Sicily were maintained to the end. The reason for this seems to be that, owing to poor relations between Corinth, on the one hand, and Samos and Miletus on the other, the flow of exports from Corinth to the East was prevented, giving Athens her chance to

succeed in securing the Rhodian market. For the "aristocratic" quality of Late Corinthian, a good deal turns on the golden Kypselid bowl in Boston, whose type appears on a Corinthian vase (Louvre E630) and on a Laconian vase attributed to the Arkesilas painter, and therefore dated at about 565, showing strong Corinthian influence. Another object that will disprove the earlier date for the fall of the Kypselids is that masterpiece of Late Corinthian, the Amphiaraios krater, one of whose designs is that of the principal panel of the Chest of Kypselos. This vase is "either . . . an elaborate morsel of high treason . . . or the dynasty did not fall in 584 B.C." Payne, although leaning towards the dogmatic Apollodoran chronology, could and did date the Chest of Kypselos in the second quarter of the sixth century, which is, according to Smith, "downright apostasy" from that dating. The discovery in 1935 of the painted wooden tablets from the cave of Pitsa, in the western part of the region of Sikyon, which are of the period of the Amphiaraios krater, and which are admittedly Corinthian, as is proven by an inscription on the best preserved example, is further evidence against the Apollodoran chronology, and in favor of the "traditional" or Herodotean. A reason adduced by Smith to account for the decline in Eastern trade is the "jealous control of an Adriatic lifeline" by the Kypselids—the founding of Ambrakia, Anaktorion, and Leucas to secure the Ambracian Gulf, and protect the carrying trade to Tarentum, which, according to Payne, "has produced more Corinthian vases than any site in Southeast Italy," and which was the terminus of the Corinthian trade-line. Corcyra was not under full Corinthian control until after 560 B.C. In any case, in the last years of the tyranny, Corinth's thoroughfare to Italy was safer for her commerce than ever before or after. But this safety was of short duration, for within a few years after the recovery of Corcyra, the Kypselids fell, and as the settlements on the Ambracian Gulf did not take part in the Corinthian revolution, their strength now became Corinth's chief weakness in Western trade. As the ceramic trade of Corinth with the Adriatic continued uninterrupted till the middle of the sixth century, when it came to a sudden end, this confirms the dating of Herodotus. This also fits with the facts of Rhodian archaeology and Samian history, as Periander's conquest of Corcyra is synchronous with his complete humiliation in the southeastern Aegean. A cargo of

Coreyraean children sent by Periander to Lydia was rescued by the Samians, and returned to their home by the Knidians, who had a colony, "Black" Coreyra, in the Adriatic. The story of Herodotus regarding this episode is confirmed, at least as far as dating is concerned, by the inscription of the statue dedicated by the Samian Aeakes, who was the official collector of seized cargo for the sanctuary of Hera. This inscription is one of three which concern the chronological problem. The others are from the Corinthian Treasury at Delphi, which seems to mark its taking over by the people after the fall of the Kypselids, and the Sigeion stele. The date for the Samian inscription has been set at 540, the Delphian in mid-sixth century, while the Sigeion stele is probably of the same general period. A curious fact is that just at the time when Corinthian pottery practically disappears at Rhodes, there is a great increase in Fikellura ware, which is probably of Samian origin, or made under Samian influence. If Samos was a ceramic competitor of Corinth, as seems likely, she had further reasons for damaging Corinth in trade. All ceramic evidence, therefore, favors the dating of Herodotus.

#### INSCRIPTIONS

**Festival of Boegia at Didyma.**—In *Univ. of Calif. Publ. Class. Arch.* i, pp. 291–304, pls. 35–40, JOSEPH FONTENROSE discusses a lost inscription, copied by Cockerell and Le Bas early in the nineteenth century, that concerns this festival, and is of great importance for the religious calendar of Miletus and Didyma. It is in two parts, and in another place (*Univ. of Calif. Publ. Class. Phil.* xii, 1942, p. 169 f.) the writer has proposed a restoration of the second part. In this article he offers a final text for the first part, which is done by a comparison of the copies of Cockerell and Le Bas, and is accompanied by a commentary and translation. The inscription can be dated in the year 17/16 B.C. The writer then proceeds to discuss the nature of the Boegia festival, which has only been done previously by Hausoulouier; since his article appeared, the German excavators of the Milesian Delphinium have discovered a very important inscription of 200/199 B.C. which deals with this festival. This proves that in that period the sacrificial ox and the phialae of the victors were offered to Apollo Didymaeus. A functionary of the cult had the title Boegos for Zeus Hyetios, and was appointed for a term of

one year. Owing to the great expense of the festival, it had lapsed for a number of years before 17/16 B.C. According to Hesychius, an ox was also sacrificed to Zeus, so the festival was celebrated in honor of both Zeus and Apollo. The Zeus in question was probably, however, Zeus Soter. We can only guess at the nature of the rite and contest involved. The victor in the Boegia and the Boegos were not the same individual—the Boegos may have been the priest of Zeus Soter (and of Zeus Hyetios). From this study we see that Zeus was in truth the second god of Didyma. Finally the date of the decree in question, 17/16 B.C., is that of the *Ludi Saeculares* at Rome, and the festival may have been renewed in response to Augustus' program for the revival of the older religious forms.

#### ITALY

##### GENERAL AND MISCELLANEOUS

**Minturno.**—The *London Times* for May 1, 1944, reports that in a ruined church in this town, there has been found a deposit of books, manuscripts, and pamphlets that formed a part of the library of the University of Naples. A partial list of the contents of this discovery is given. The consignment was removed to Naples, for eventual restoration to the University.

**Mosaics from Daphne.**—In *PAPS*, lxxxvii, 1944, pp. 420–428 (5 figs.) DORO LEVI discusses mosaics illustrating the novel of Ninus and Semiramis. Among the numerous and important mosaics discovered during the last few years in connection with the excavations directed by Princeton University at Antioch-on-the-Orontes, a small panel, brought to light from the ruins of a house at Daphne, the famous summer resort of Antioch, and now exhibited at the Museum of Historic Art in Princeton, shows a very peculiar representation. A young man sits in his bed and looks at a portrait. In front of him a woman standing near another bed offers him a cup. The interpretation of the mosaic is facilitated by the resemblance it bears to another mosaic recently discovered at Alexandretta, and bearing on it an inscription designating the figure on it as Ninus. The mosaic can hardly be an illustration of the earliest legend of Ninus and Semiramis, which seems to have spread along the shores of Ionia as early as the fifth century B.C., but of a Hellenistic novel, of which only scanty fragments are preserved in a couple of papyri. This interpretation is confirmed by the subject of a second mosaic discovered in



the same house at Daphne, which depicts a scene from another Hellenistic novel, this time determined by the inscriptions of the two figures represented: Metiochos and Parthenope. We have before us, consequently, the ruins, from about 200 A.D., of a house of an ancient lover of literature, who decorated its pavements with mosaics representing some of his favorite reading. This kind of representation is very rare among the mosaics preserved to us.

### SCULPTURE

**The Sidmouth Bronze.**—In *AJ.* xxiv, 1944, pp. 22–27, M. V. TAYLOR determines that this well-known figure of a centaur and rider is the ornamental end of one leg of a folding tripod and not a legionary standard.

**Statue Fragments.**—In *AJ.* xxiv, 1944, pp. 1–10, I. A. RICHMOND discusses a head of Constantine found in York about 1823; a bronze horse's leg found in Lincoln about 1800; and a bronze lappet found at Silchester in 1890. Richmond's attribution of the head to Constantine is convincing; the lappet is described as part of a bronze statue in armor, said to be of pre-Hadrianic style.

### ROMAN BRITAIN

**Margidunum Mortaria.**—In a noteworthy article in *AJ.* xxiv, 1944, pp. 45–63, FELIX OSWALD describes and illustrates 99 mortaria types found at Margidunum. These are arranged in chronological order, the period covered ranging from A.D. 50 to 400. Some references are given to similar types on other English sites, for example to nineteen of the Wroxeter types. It is regretted that more along this line was not included, for over 1500 drawings of these mortaria are available. The study of both types and makers' stamps needs and deserves study. This is an excellent contribution to such a study.

**A New Milestone.**—In *AJ.* xxiv, 1944, p. 65, R. P. WRIGHT reports the discovery of a milestone of Gordian III, found at Gwennap, Cornwall. This is the earliest milestone known from Cornwall, and of importance because of that fact.

### EARLY CHRISTIAN AND BYZANTINE

**The Rubens Vase.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 9–39, MARVIN CHAUNCEY ROSS discusses the history and date of the large carved agate vase known as the Rubens vase. It is a little over seven inches in height and

roughly oval in shape, flaring slightly at the mouth and tapering to a flanged base. The rim is covered with a gold mount of comparatively recent date. Two knob handles are carved in the form of the head of Pan. Below each head is an acanthus leaf and on the sides are grape vines with leaves and fruit. The relief is very high, while the walls of the vase are as thin as porcelain. It was acquired by the Gallery in 1941 at the sale of art objects belonging to Mrs. Henry Walters. The piece was known to have been in several English collections, and was presumed to have been owned at one time by Rubens and to have been sketched by him. The author has proved this fact by locating a print of the engraving, which is obviously of the same vase. Through a study of correspondence between Rubens and his antiquarian friend Nicolas-Claude Fabri de Peiresc, we learn that Rubens acquired the vase at the "Flea Market" in 1619. It is quite likely that it was among pieces stolen from Fontainebleau in 1590. Description of a piece which might be this vase appears in an inventory of the royal jewels made in 1560, and in two inventories of Louis de France, Duke of Anjou, the earlier compiled about 1360. In all published references to the vase, it has been considered of ancient Greek or Roman workmanship. Recently, however, it has been suggested that it might be a renaissance piece or even more modern Neo-classic. By tracing the history of the piece back to the fourteenth century, the author has disposed of these two theories. He believes, however, that it is an early Byzantine work, a product of the period of transition between Roman and Byzantine, about 400 A.D., and cites many stylistic parallels in support of his thesis.

**Origin and Meaning of Mandorla.**—*G.B.A.* ser. vi, xxv, 1944 starts its new year with an article (pp. 5–24; 8 figs.) by OTTO BRENDEL on this subject, largely inspired by a recent article (*ibid.* xxii, 1943, p. 135 f.) by Shapiro on Early English renditions of the Ascension. The mandorla is an aureole, surrounding the entire body, as opposed to the nimbus or halo over the head, and is supposed to proceed from the body of a saint or deity. The "majestas" in which the apocalyptic appearance of Christ is represented, is always given as a mandorla in Byzantine art. In the case of the Monza phials, the mandorla is supported by four angels, and typifies the cloud (*Acts* i, 9) that received Christ on His Ascension. Two theories recently advanced—(1) that the mandorla took over the form, and perhaps the meaning, of pagan



representations of a god surrounded by the zodiac, and (2) that it is derived from the *imago clipeata* of Roman art, are discussed and rejected, so that one must look elsewhere for its origin. It is not until the tenth century that our Lord is shown moving within the mandorla, which still may be said to represent the cloud. In the Codex of Egbert Christ walks into Heaven, enveloped in the cloud but not carried by it, and the angels are absent—it is a true mandorla. In the mosaic in Sta. Maria Maggiore in Rome, showing Abraham and the three angels, the central angel is surrounded by a mandorla, as well as having the halo over the head that the other two have. Here the mandorla is used as an aureole. It is used in another of these mosaics, the revolt of the Children of Israel against Moses (*Numbers* xiv, 10 f.), and in this case, Moses with two companions (Joshua and Caleb?) fleeing from the crowd, are surrounded by a mandorla, which issues from the hand of God. It therefore does not emanate from Moses or his companions, and cannot denote an aureole. It might be called a cloud. Thus in these mosaics, both from the same place, the mandorla appears in two different significances. Thus we have seen it assume three different meanings—(1) an aureole, (2) the cloud of the Ascension, (3) a cloud of Divine protection, representing the visual intervention of the Lord in human affairs. Such a mandorla also appears in scenes of Divine salvation. This form, typifying Divine intervention and protection, can be found in Greek art, and Brendel cites the well-known krater by Python in the British Museum, showing Alcmena on the funeral pyre, with Zeus coming to her rescue. Alcmena is surrounded by a mandorla. He also refers to an Apulian vase "once" in the National Museum at Naples, showing Poseidon and Amymone within a vault, which is really a celestial cloud, therefore a form of mandorla. The conclusion is reached that the mandorla seems to have come into Early Christian art by way of the Old Testament illustrations, influenced by Greek art, through which it received the significance of a protective cloud. Where it is introduced into New Testament illustrations, it follows the tradition of the Old. It appears in representations of the Transfiguration and the Ascension, and in the former it symbolizes the δόξα, or glory, of Christ, while in the Ascension it represents the cloud that received Him, which is thus equated with the "glory" of Old Testament prophecy. These representations became decisive for the later Byzantine

and mediaeval use of the mandorla as an artistic symbol. Indeed, in the Utrecht Psalter, the psalmist himself is seen within a mandorla.

**Early Christian Inscription.**—A Syriac inscription of 575 A.D. is published by PAUL MOUTERDE, S.J., in *MusJ.* xxv, 1942-1943, pp. 81-86. It comes from the Gebel Bil'ās, and records the construction, by the master-mason who set up the inscription, of a rampart. From the mention of an archimandrite it is clear that the building so fortified was a monastery, which in its isolated position might well need protection.

**Mosaics of Hagia Sophia.**—*B.M.M.A.* n.s. ii, pp. 201-210 (8 figs. and cover illustration) prints an article on this subject by CHARLES RUFUS MOREY. He points out that these mosaics are to Byzantine Art what the Elgin Marbles are to Greek Sculpture. Up to the uncovering of these mosaics, our conception of Byzantine Art was based on very insecure foundations, and was of slight relation to reality. We now know what the ateliers of Constantinople could do in the ninth or tenth century, and they are, in fact, our only examples of Byzantine mosaics of this period. The Deësis in the triforium is the most important item in the corpus of Byzantine Art, and fully embodies the climax reached in the eleventh century, while the Imperial portraits of the South Gallery mark the beginning of the decline in the later eleventh and early twelfth centuries. No example of a Deësis occurs before the ninth century, and it is treated dogmatically rather than emotionally, as it is in Romanesque and Gothic. The trend towards irrealism is manifested by the abhorrence of the third dimension, and preference for a single plane. Painting was considered "more holy" than sculpture, which was distrusted as too real for supernatural themes. The bearded Christ of the Deësis was imitated by the Sicilian mosaicists of the twelfth century (Cefalù, Palermo, Monreale). The bearded Christ descends from the representations of the greater gods of Greek mythology (Zeus, Hades and Poseidon) and originated in Syria and Palestine. In Greek lands the early representations of Christ are beardless and long-haired (Apollo, Dionysos), while Egypt favored the beardless, short-haired type (Hermes). Gradually the bearded Christ supplanted the others, and this was the work of Byzantine Art—"it satisfied the nostalgia of Greek Christian art for its Hellenic origins: it is the Olympian Zeus of Phidias, tempered with compassion." A comparison of the Christ of the Deësis with the almost contemporary

Christ between Constantine IX and Zoe (after 1042) shows a more mundane rendering, and is doubtless due to the fact that these heads are all later restorations. Not dissimilar is the mosaic of the Virgin and Child between John II and Irene (1118-1143), but the portraiture is much more accurate and prepares the student for the striking likenesses of royal donors on Serbian churches, from and after the twelfth century, which marks the inroads of realism seen also at St. Mark's in Venice. The Madonna in the apse of Hagia Sophia, which Morey at first considered late, is now believed to be an example of the more subtle art of the ninth century, an echo of the end of the Iconoclastic Controversy, and a date of 866-67 (reigns of Michael and Basil) is suggested. The mosaic of the central doorway from the narthex into the nave is of the time of Leo the Wise (886-911), while the mosaic over the south vestibule doorway into the narthex is probably of the time of Basil the Macedonian. It shows the Virgin receiving a model of the church from Justinian, and one of the city from Constantine. Whittemore dates this at the end of the tenth century on the basis of the monograms on either side of the Virgin, but Morey believes them to be later interpolations, and to place the mosaic well in the ninth century.

#### MEDIAEVAL

**Golden Altar at Milan.**—In *The Art Bulletin* xxvi, 1944, pp. 25-45, Staff-Sgt. GEORGE BISHOP TATUM, USA, offers a solution to the controversial archaeological problem posed by the altar in the church of Sant' Ambrogio at Milan. The question has been primarily a matter of date—some scholars believing it to be a work of the twelfth or thirteenth century, others defending an earlier date in the ninth century. The chief archaeological impasse has been the apparent "discrepancy which seems to many scholars to exist between the dedicatory inscription and the style and iconography of the repoussé plaques which make up the altar and to which the inscription seems accordingly to refer. The frame of the Paliotto is of wood to which are attached repoussé plaques banded by box-enamels." The plaques on the front are made of gold, while those on the back and sides are of gilded silver. "The inscription is in niello and surrounds the three nearly equal sections into which the back of the Paliotto is divided. The words are so placed that the first letter of each of the vertical bands serves also in one of the words of the

horizontal inscription above and below. The verses in Latin hexameters . . . record that the altar was erected in honor of St. Ambrose at the order of Archbishop Angilbert," the second bishop of that name, whose episcopate extended from 824 to 859. One might presume, therefore, that the altar was built during these thirty-five years. It has been suggested that the inscription might be a later copy of an original ninth-century one, but the lettering is definitely Carolingian and original.

The Archbishop Angilbert appears in person on one of the four medallions on the back of the altar. He is represented as wearing a square nimbus, which has usually been interpreted to indicate a living person. The author offers several examples to support his belief that "in the ninth century the so-called square nimbus was really a mark of distinction given to persons, real or mythological, living or dead, who by their special qualities or virtues had risen above the common level of mankind but without attaining the position of sainthood. . . . Angilbert on the Paliotto is placed, by virtue of his rectangular nimbus, midway, in honor, between Ambrose, who wears the round halo of a saint, and Wolvinus, the artist of the Paliotto, represented in the neighboring medallion, who, as a simple craftsman, wears no nimbus at all." Tatum suggests, also, that the terms applied to Angilbert in the inscription are too glowing for a living man of his position, and that "dicare" may be translated as "commission" rather than "dedicate." He thus believes that the altar was completed after Angilbert's death.

It is obvious at a glance that there are two distinct artistic styles in the construction of the altar—one on the sides and back, the second on the front. The author discusses each of the scenes at length and cites many parallels. He concludes that the back and sides are Carolingian, "and while there are no close parallels to the style of the Paliotto among extant Italian works, there are a number of both stylistic and iconographic affinities between the altar and Frankish works of the ninth century, notably those of Tours." Convincing parallels for the scenes on the front are found in works of Ottonian date, especially the Reichenau manuscripts of the late tenth and early eleventh centuries. Tatum concludes, therefore, "there seems to be only one interpretation which will explain adequately the Carolingian inscription of the back of the altar and the Ottonian iconography of the front, namely that the two portions of the

Paliotto are of different dates, the back and ends of the ninth century, the front of the tenth."

Three of the panels from the front of the Paliotto were stolen about 1590 by an untrustworthy canon of the church. "The canon was later executed in Rome for further crimes, but nothing more has been heard of the panels." They were replaced almost immediately. The three Renaissance panels, undoubtedly the work of a Milanese metal-worker, are discussed in a brief note by Lieut. (j.g.) PAUL FOOTE NORTON, USN, *loc. cit.*, pp. 46-47.

**Influence of Mysteries on Mediaeval Art.**—In *GBA*, ser. vi, xxiv, 1943, pp. 327-342 (7 figs.) GUSTAVE COHEN discusses this very important subject. The mediaeval artist was "an ignorant fellow" and was "inclined to accept . . . the figuration offered to him by the players, and the setting of the scenes . . . by early producers." For illustration, he first takes the Visit to the Sepulchre by the Holy Women, as shown in reliefs from Beaucaire in Southern France, and from Modena in Italy, dating in the eleventh century. The "women" are men in women's dress, and one figure, holding a pair of scales, who appears in both reliefs, can be identified only by referring to the liturgical dramas. He is the seller of perfumes and ointments who is selling his wares to the Holy Women at the entrance to the tomb. The liturgical drama of Christmas is to be derived from that of Easter, when midwives take the place of the Holy Women, and are associated with the visit of the Shepherds, or of the Wise Men at Epiphany. In the mysteries, the Wise Men visit Herod, and a representation of this, derived directly from this source, appears on the lintel of the St. Anne portal of Notre Dame de Paris, and is dated in the earliest period of its construction, ca. 1164. On the same church, the pediment of the North transept door bears a representation of the Miracle of Theophilus, which is also derived from a mystery play, and is the original of the Dr. Faustus myth. The story of this mystery is given in detail. From a mystery of the *Nativities*, dating in the thirteenth century, is derived an engraving in a book of 1498, where two shepherdesses are offering gifts to the Infant Jesus, whose names and gifts are identical with those in the mystery. In the fourteenth century, a mystery of the Passion was played about 1370, which had a very definite influence on art. In the fifteenth century it can be proved that the painting of the Martyrdom of St. Apollinus by Jean Fouquet is derived

from a mystery play on the subject. Finally, it is asserted that the influence of the mysteries can be seen in works of Brueghel, and of Jerome Bosch, and even as late as Rembrandt.

**Early Italian Tabernacle.**—In *GBA*, ser. vi, xxv, 1944, pp. 129-152 (30 figs.) GERTRUDE ACHENBACH publishes a small tabernacle for private worship, in the possession of the Earl of Crawford. It consists of a central panel and two movable wings. The central panel is divided into three parts. The main field is filled by a representation of the life of the earliest monks of the Thebaid. Over this is a gable with half-length figures of the Redeemer with three angels on each side, while below is a strip forming the stand for the tabernacle, with remains of an inscription in Gothic uncials, much of which is missing, but apparently giving the signature of the artist, a name which in its fragmentary state cannot be identified. The wings are hinged to the center and shaped so that they completely cover the main field, leaving the gable uncovered. Each wing has three representations, all dealing with the Passion of Christ. In four cases traces of the titles of the scenes remain. This tabernacle has no known parallel in Italian art, but it cannot be earlier than 1271, nor later than the end of the Dugento. Its shape appears in modified form in a monumental tabernacle by Guido da Siena in the Palazzo Pubblico in that place. Previously the usual form had been the flat-topped Byzantine type, the central section of which was often framed by a Romanesque arch. The iconography of the central panel is unique, when considered in relation to the wings, but is explained in that, like their Master, the monks of the Thebaid interceded between sinful man and God. The influence of Byzantine art is very striking, and derives from icons of the twelfth or thirteenth century. The earliest known representation of Thebaid scenes now in Italy is the fresco in the Campo Santo at Pisa, which is considerably later than this tabernacle. There are also some small fourteenth-century panels with these scenes, which have survived, chiefly of the Sienese school, while later examples are Florentine, indicating a strong Thebaid tradition in Florence. Various examples are listed. The literary sources for these scenes are also given at some length, with quotations which explain the iconography. The lowest scene on the Crawford panel deals with the death of St. Ephraim the Syrian. Other saints identified are Simeon Stylites, Hilarius of Gaza, Anthony the Abbot, and possibly Jerome. The representa-

tion of the desert is greatly idealized. In contrast to the central panel, the wings show only indirect Byzantine influence. The direct source is Italian work of the thirteenth century, especially Tuscan crosses. The iconography of the scenes and their selection and arrangement all show this. The closest parallel to the portrayal of the Flagellation (right wing, top panel) is found on a tabernacle in Berlin by a Sienizing follower of Cimabue. Below the Flagellation is the Mocking of Christ, which corresponds in some details with a cross in San Gimignano. The central panel of the left wing shows the Crucifixion, while the top panel, with fluttering angels, is part of the same scene. Again the tabernacle in Berlin shows a close resemblance, but the most important source is Cimabue's fresco in Assisi, while Guido da Siena's panels in Siena and New Haven are also significant. Other parallels are noted. The bottom panel of the left wing, with the three Marys at the Tomb, shows the characteristic Dugento iconographic scheme, except for the angel flying over their heads, swinging a censer, which is Byzantine in origin. The angel at the Tomb is reminiscent of Cimabue, as are the Marys. Finally, the lower right wing panel shows the Descent into Limbo, where the Byzantine influence is strongly diluted by Western motives. On stylistic grounds this tabernacle is closest to the Sienizing followers of Cimabue, of the end of the thirteenth century. In consideration of the style, the Crucifixion panel is especially revealing, standing midway between Cimabue and the Sienese school. In the central panel, many of the plant forms are related to the cupola mosaics of the Baptistery in Florence, particularly the cycle of St. John the Baptist, which show strong Byzantine influence. Space is represented in three dimensions, but the third dimension is very limited. A date of 1285-1290 is suggested as the most probable.

**Art and the Commune in the Time of Dante.**—Under this title HELENE WIERUSZOWSKI presents in *Speculum* xix, 1944, pp. 14-33, an interesting study of the blossoming of the arts in mediaeval Italy, showing how the communes, through the development of democratic government shaped by the growing political importance of an industrial and mercantile middle class, gave expression to a flourishing cultural life. Although devoting all their means to stimulating individual endeavor in free competition and releasing vigorous forces hitherto bound by ecclesiastical tradition, they nevertheless imposed new bonds by attaching the

cultural activity of the citizen to municipal political needs. This holds particularly true of architecture, in which the necessities of communal life produced an entirely new secular type, culminating in the splendid Gothic town halls of central and northern Italy. Scarcely less important is the part played by the municipalities in the construction and maintenance of the churches within their walls, since it now appears almost certain that the communes, endeavoring to realize an ideal of representative style in their secular public buildings, came also to exercise marked influence upon the development of ecclesiastical architecture.

Although the related arts of painting and sculpture were chiefly associated with the Church even to the end of the fifteenth century, the communes were equally concerned with the decoration of their buildings, and extended this concern to all structures, including the churches, which had come under the supervision of the municipality. Thus the town fathers and the heads of the guilds summoned the best artists to undertake the decoration of halls, cathedrals and churches, with the result that the commune took its place beside Church, kings and princes as patron and client of painter and sculptor. The question then arises as to what this new type of patronage meant for the development of the arts, and on the answer to this question is centered the major part of Miss Wieruszowski's paper—a discussion of "political art" in the Italian communes.

The author begins with Duccio's famous *Maestà* in the Opera del Duomo at Siena, one of the first paintings known to have been commissioned by a commune, and shows how its history indicates that the painter must have known and considered the taste of his fellow citizens. In 1315 Simone Martini was commissioned, as official painter, to depict in the council chamber of the new Palazzo Comunale an enthroned Madonna surrounded by her royal court of saints and angels so that, as queen of the city, she might personally assist at the council meetings and inspire the authorities to wise decisions. Smaller communes such as Massa Marittima and San Gimignano followed suit, the latter obtaining for its council room a Madonna by Filippuccio and Lippo Memmi in which, in addition to the patron saints, was included a portrait from life of Nello dei Tolomei, podestà of the city in 1317 when the work was commissioned. This is not a "donor portrait" in the ordinary sense of the term, since Nello appears rather as the representative of his



city, imbued with something of the self-consciousness and pride of independence so powerful even in the smallest states. A comparable work is the famous picture by Simone Martini of the Condottiere Guidoriccio da Fogliani in the council chamber of Siena, in which the painter has conveyed a sense of the armed strength of the commune behind its leader.

By the end of the thirteenth century, frescoes commemorating incidents of municipal history had become numerous, e.g., a painting in the Bargello of Florence representing the battle of Campaldino (1289), and another of the triumphs of the Florentine Guelphs. A work attributed to Giotto's school, and representing the expulsion of the Duke of Athens by the Florentines in 1343, suggests the importance of allegory in the art of the period, since the artist has concentrated the whole action in the person of Saint Anne, on whose day the tyrant was driven forth. This picture of the fleeing and abandoned Duke warns all betrayers of liberty and, like other historical paintings of the age, reveals a politico-didactic tendency which gave rise to a wholly new form of communal painting, that known as "pittura infamante." The latter, from an instrument of municipal justice, developed into a useful weapon of party struggle, and was employed in fights between the democratic government and its enemies. For subjects of a more moral and didactic nature the artist used the traditional symbolic language of the Church, as Giotto did to good effect in the Arena Chapel, with his lively interpretations of Justice and Injustice. And in the hall of the Mercato Vecchio at Florence, Taddeo Gaddi, one of Giotto's pupils, drew judges tearing out the tongues of liars, the commune itself represented as a judge. It was Giotto again who first introduced into the painting of his age the allegory of the commune and the nature, good or bad, of its government. And the culminating point of political painting in this period was attained in the large frescoes of Good and Bad Government which Ambrogio Lorenzetti executed in 1327 in the Sala dei Nove of Siena.

Beyond its ethical and political purpose, the commune also aimed to erect monuments to its own glory and power, e.g., the famous fountain of Perugia by the Pisani and Arnolfo di Cambio, and strove wherever possible to link its legendary traditions to the glory of the Roman past. Indeed, a close association of mediaeval Christian and ancient pagan motifs is characteristic of many works

of art in this time, as the reliefs of Giotto's Campanile in Florence bear witness, and this concern with ancient history and mythology is paralleled by the marked influence which antique art itself was now coming to exercise upon the forms of contemporary art, especially sculpture. It seems clear also that the communes, with their predilection for ancient subject matter, favored and encouraged the new artistic style.

General features of the age of Dante are a growing sense of reality, a yearning for knowledge, and a wide curiosity before the problems of nature and life—features which appear unmistakably in the art of Giotto and the Sienese school. And it was just these impulses in the new art which were stimulated by the communes. More than mere clearness was demanded for the "pittura infamante," and traditional churchly symbols were replaced by scenes from life in those reliefs representing human arts and labor which, on the Campanile in Florence, summarize the microcosm of the state. Nor did the latter neglect the esthetic side of such commissions, since a number of documents prove how consciously the municipal authorities set about to embellish their cities honorably. The communes, moreover, vied continuously with each other to obtain the services of the greatest artists by offering them special privileges, high salaries and even public office; and, as to esthetic values, they recognized and asserted that art is a source of pleasure to mankind. In its correspondence with the ideal of the society in which he lived, Giotto's work, together with Dante's, is the sublimest expression of the first crowning period of the Italian commune.

**Project for a Map of Florence, 1250-1296.**—F. J. CARMODY publishes in *Speculum* xix, 1944, pp. 39-49, a reconstructed map of Dante's Florence. In laying it out he started from a detailed comparison of Bonsignori's remarkable plan of 1584 with that by Zocchi dated 1783, and controlled his study by reference to later maps, keeping all variants in mind for confirmation. This material was then emended from Latin documents, the best of which is the list of damages to Guelph properties from 1260 to 1265, as set forth in volume VII of the *Delizie degli Eruditi Toscani*. He points out that many more similar documents are still extant and can be readily utilized, and also that the division of the city into parishes has never been fully studied. He excluded from his researches the parts of the city south of the Arno as being extensive and new, and the rich material



on the regions lying close to the second walls was likewise set aside in order to centralize all effort on the oldest quarters. In concluding his article, Carmody gives a bibliography of all the works used for his emendations, and sets up, through a system of key numbers, a summary reference list of the properties and parishes as he defines them.

**Early Sienese Panel.**—MARGARETTA SALINGER publishes, in *BMMA*, n.s. ii, 1944, pp. 181–183 (fig.), a Madonna bequeathed to the Metropolitan Museum by the late Maitland F. Griggs. Obviously of the fourteenth century, it has been at different times attributed to Duccio and Lippo Memmi, but the author prefers to assign it to Barna da Siena, who flourished in the second half of the century, and was probably dead by 1356. The Madonna is flanked by Sts. John the Baptist and Francis (in a miniature scale) and under the picture, at the bottom of the frame, is a miniature predella with half-length figures of other saints. The panel was obviously painted as an image for private devotions, and not as a church altar piece.

**Champlevé Enamels.**—In an article in *Speculum* xix, 1944, pp. 34–38, W. L. HILDBURGH discusses certain Italian copper champlevé enamels of the thirteenth century. He points out that the claims for a French origin of enamels of so-called "Southern" types has recently been challenged, some having been assigned to Spain, and others to Italy. Quoting a remark from Stohman's book on the Museo Sacro enamels, he agrees that, if such works were produced in Italy in the twelfth and in the fourteenth centuries, there is no good reason why enamels of the so-called "Limousin" type should not also have been made there in the thirteenth. He thinks it probable that there existed in Southern Italy a considerable enamelling industry, so closely associated with the Spanish that the Italians were able to use presumably Spanish elements as if they were their own. The old hypothesis which would account for Spanish and Italian enamels as exportations from the Limousin region seems to be ruled out by a number of pertinent facts. In the light of this theory Hildburgh then discusses certain specific works—a cross in the Museo Sacro, a pair of Gospel-covers, a "Majesty" plaque, and various other fragments from the same collection and concludes that, if Spain and the Limousin were simultaneously producing wares between which we are at present unable to distinguish clearly, there is no good reason why

Italy should not have imitated such of those wares as came to her, particularly if it paid her to do so.

**An Austrian Triptych.**—In a brief note in *The Art Bulletin* xxvi, 1944, pp. 51–52, GRETE RING attributes a triptych, recently sold at auction in New York and now in the collection of Mr. Clarence Y. Palitz, to the Austrian Master of the Krainburg altar. It was at one time considered to be a French primitive, as were several other pieces which are now assigned to Austrian painters.

**Pseudo-Gothic Ivories.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 49–59, ADOLPH GOLDSCHMIDT discusses a group of ivory triptychs, three of which are in the Walters Art Gallery. Though very beautiful and charming pieces, they are not authentic Gothic. They are undoubtedly of Spanish workmanship and date toward the end of the nineteenth century. The author is inclined to believe, no evidence to the contrary, that they are the work of Francisco Pallas y Puig, who specialized in ivory carving and is known to have done pieces in the styles of other periods.

## RENAISSANCE

**Date of the Voynich MS.**—A note by HUGH O'NEILL, "Botanical Observations on the Voynich MS", in *Speculum* xix, 1944, p. 126, suggests a post-Columbian date for this strange codex which has been called the "most mysterious manuscript in the world." In attempting to establish the identity of the numerous plants figured in this MS, the author identifies that represented on folio 93 as quite plainly the common sunflower. Since the seeds of this plant were first brought to Europe by Columbus on the return from his second voyage in 1493, it seems logical to assume that the MS was written sometime after this date.

**Flemish Painting.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 41–47, EDWARD S. KING attributes two recently cleaned panels in the Gallery's collection to the Master of the Joseph Legend, a close follower of Roger van der Weyden. The author discusses the other works attributed to this painter and the characteristics of his style. The two new pictures are altarpiece panels, one depicting St. Barbara directing the Masons, and the other, the Martyrdom of St. Barbara. It is probable that the entire altarpiece was devoted to the legend of the young Christian mystic.

**Raphael and His School.**—In a long article in *The Art Bulletin* xxvi, 1944, pp. 67–94, FREDERICK

HART discusses the late work of Raphael and his outstanding pupils and collaborators, especially Giulio Romano, Penni, Raffaellino dal Colle, Giovanni da Udine and Benedetto Pagni da Pescia. He takes up several frescoes and by comparison of style and technique attributes scenes and figures to different artists. It is impossible to summarize such a detailed discussion. In conclusion the author states: "We have thus been able to follow the development of the proto-Baroque late phase of Raphael, and to see in detail how Giulio, his most talented and imaginative pupil, employed the motives and figure style of the late Raphael for purposes profoundly opposed to those of the High Renaissance. We have observed the virtuoso pupil creating a new style, full of inner tension and surface intricacy within the school of the harmonious Raphael and before Raphael's death. We have seen this new style replace Raphael's free, spiral movement in space with inhibited angular movements in one plane, and have considered this new style as symptomatic of the anti-classic phase of Italian Cinquecento painting, and thus related fundamentally to the more outspoken Mannerists of Florence, Siena, and Parma. We have followed the expansion of the new anti-classical yet basically Roman style in a second, more elegant yet more fully authoritative phase in the years directly following Raphael's death, a phase that was to be of great influence, not only on the rhetorical late Cinquecento style of Vasari and Salviati, but also on the historical paintings of Rubens. Four of the minor assistants of Raphael have taken shape for us, and we have been able to arrive at fairly definite conclusions regarding the separation of the school pieces amongst the various hands."

**Fountain Group from Atelier of Pilon.**—In *BMFA*. xlii, 1944, pp. 1-11 (12 figs.) GEORG SWARZENSKI publishes a bronze fountain group recently acquired by the Museum of Fine Arts in Boston, formerly in the Clarence H. Mackay collection, composed of three nude female figures holding up a basin. Of its history before it was purchased by Mr. Mackay nothing is known. It was originally cast in four separate parts, the three statuettes and the basin; to the latter were cast the supporting hands and forearms of the figures. The water for the fountain was conducted in pipes inside the figures, and came out from the lifted arms, pouring thence into the basin. The group is complete in itself, and was meant to be seen at a fairly good height. It "belongs among

the favorite objects of artistic luxury, developed in the princely and aristocratic abodes, particularly at Florence or in France," and may have stood in a garden or court. Similar compositions where a basin is supported by figures are not very common, but there exists an engraving by Ducerceau, of 1551, showing a fountain very similar to this, which suggests a French origin and a Renaissance date, which is also confirmed by the style of the figures. It "may be regarded as a characteristic achievement of sixteenth century Mannerism"—and the author then develops what is meant by this term. The influence of Michelangelo is noted in the pose of the figures, but these figures are no mere copies, but original creations. One may also see some influence of Cellini. In the Mackay Collection the group was ascribed to Jean Goujon, but the writer rejects this attribution. For reasons given at some length, and with some consideration of the style of Primaticcio, he assigns the work to Germain Pilon, whose early works are the most closely related to the fountain. For comparison, two of the figures by Pilon at the tomb of Henri II in St. Denis are illustrated, which show "the most intimate relation" to the Boston fountain. Another object strikingly similar is Pilon's statue of the Three Graces in the Louvre, his earliest preserved masterpiece. A date in the middle of the sixteenth century is therefore indicated.

**Model by Pierre Lepautre.**—In *The Journal of the Walters Art Gallery* vi, 1943, pp. 71-81, GERTRUDE ROSENTHAL publishes a terracotta model made by Pierre Lepautre for his sculptured group, "Aeneas and Anchises Fleeing from Troy," which he completed in 1716 and which was set up in the Jardin des Tuileries in 1719. He was commissioned by Louis XIV to do the work while he was a student at the École de Rome. Lepautre worked on the model in Rome and submitted sketches which were approved. He finished the marble after his return to France, but the completion was delayed for fourteen years, since it was impossible to transport the marble from Italy owing to the War of the Spanish Succession. The Walters *bozzetto* is the later of two known terracotta models, which the sculptor made.

## AMERICA

**Early Human Remains in America.**—In *PAPS*. lxxxvii, 1944, pp. 407-419, M. F. A. MONTAGU and C. B. PETERSON discuss "*Human Artifacts Associated with Fossil Mammals in North America.*"

The first discoveries of human artifacts associated with the remains of fossil animals, claimed to have been made by Albert Koch in 1839, have long been discredited. In this paper the evidence is resurveyed in the light of modern discoveries and knowledge, and it is concluded that it is highly probable that Koch actually made the discoveries claimed by him. It is shown that it is not only highly probable that he discovered human artifacts in association with mastodon remains, but that it is also probable that he discovered such artifacts in association with the remains of the fossil ground sloth, *Mylodon harlani*. Finally, evidence is adduced which suggests that Koch was also the first discoverer of Folsom type points.

**Prehistoric Discovery in Delaware.**—The *New York Herald-Tribune* for June 20, 1944, reports the recent discovery of a burial pit in Sussex County, Delaware, containing eighteen bodies. CLINTON A. WESLAGER, President of the Prehistoric Archaeological Society of Delaware, declares that they are "older than any remains to be found to date in Delaware," and estimates that they date 1000 to 1500 years before the coming of the white men. They will be sent to the Smithsonian Institution.

**La Serena, Chile.**—The *New York Herald-Tribune* for August 17, 1944, reports that at this city, in the Plaza de Armas, there has recently been discovered an Inca cemetery, yielding beautiful pottery vases, believed to have been made by the Diaguitas Indians, a tribe of Inca stock.

**Wynicaco.**—In *PAPS*. lxxxvii, 1944, pp. 398-402, C. A. WESLAGER discusses "*Wynicaco—a Choptank Indian Chief*." This study presents several items which are contributory to our understanding of the Algonkian-speaking Amerinds of the Eastern Shore of Maryland. It is shown that the writers who have called Wynicaco a "Nanticoke Emperor" or "Nanticoke King" have used both words very loosely. Wynicaco resided on the Choptank River and was sachem of one of three Choptank Indian bands, named for his father, Ababco, who did not merit title to emperorship. Wynicaco succeeded Ababco as the leader of the band, thus inheriting his father's chieftaincy. The national leader of the Nanticoke Indians lived on the Nanticoke River and was known to the English as the Nanticoke Emperor. He apparently had little or no jurisdiction over the Choptank Indians. Wynicaco and the nine so-called "Nanticokes" of 1792 were not politically affiliated with

the true Nanticoke tribe but were remnants of the Choptank. Thus the vocabulary collected by Murray and reprinted by Brinton, and still preserved in the archives of the American Philosophical Society of Philadelphia, and which has been accepted as illustrative of the Nanticoke tongue, must be reclassified as a Choptank vocabulary, at least until it is proved that both Nanticoke and Choptank spoke identical dialects, which the author of this paper thinks highly probable. We learn also, from deeds and similar data presented, that Wynicaco and other contemporary Choptank chiefs and their predecessors negotiated land sales without intervention by other Indians, thus exercising autonomy on the Choptank River. Land was sold by these chiefs with the common consent of their followers. The succession of descent among the Choptank was seemingly patrilineal, and either a son or a daughter could inherit the father's position and land rights. Feminine right to "nobility," however, was recognized, and the names of four "queens" are recorded: Nehacash, Betty Caco, Pametasuck, and Mrs. Mulberry. There is evidence that the custom of preserving the remains of a dead chief in a Chiacason House was a cultural trait of the Choptank, as of Nanticokes and others of that region. In the records from 1704 to 1799 the names of the Choptank undergo gradual anglicizing, and the number of signers decreases. Finally the writer's recent field trip points to the conclusion that the blood of Mrs. Mulberry (Wynicaco's daughter) and the other Choptanks has been absorbed by the local Negro population.

**Rindge Collection.**—The Southwest Museum of Los Angeles has recently received a remarkable collection of archaeological material, numbering 5477 specimens, belonging to, and given in memory of, the late Frederick Hastings Rindge (1857-1905), who had collected them during his life, and housed them in a private museum in his Los Angeles home. They include artifacts of the Eskimo, the Northwest Pacific, Northwestern and Southern California, the Middle West, the Southwest, and Mexico, as well as a few European Neolithic specimens (FRANCES E. WATKINS in *The Masterkey* xviii, 1944, pp. 15-20).

**Willard Collection.**—In *The Masterkey* xviii, 1944, pp. 21-23 (fig. and cover illustration) FRANCES E. WATKINS reports the gift to the Southwest Museum of a collection of 7642 items, in memory of Theodore A. Willard. This collection consists in the main of photographs, sketches,

and negatives of Maya sites, many of them of great archaeological value. In addition, there are reproductions of codices and glyphs, a set of Mr. Willard's field notes, and the manuscript of a Maya-English dictionary, on which he was working, translated from the Spanish of Perez. There is also a small group of artifacts, mostly from Chichen Itza.

**Church Façades in Guatemala.**—*GBA.* ser. vi, xxv, 1944, pp. 113-126 (14 figs.) publishes a profusely illustrated article on this subject by PÁL KELEMEN. In the sixteenth century, we have the combination of the rise of Baroque architecture, and the Counter-Reformation in the Roman Catholic church, which led to a renewed emphasis on its pomp and power, which was expressed, both within and without the churches, in elaborate sculptural and architectural ornamentation. This trend, apparent in Europe, was brought to the New World by the Spanish conquerors, and to it was added the influence brought in by the Indians, some churches being the work of Indian architects. The stimulus from Europe was largely due to the Habsburg rule of Spain. The coming of the Bourbons had little effect. As a matter of fact, the Baroque style took on a local character, and outlasted that of most European countries. While the Colonial architecture of Mexico is naturally the most familiar to citizens of the United States, that of Guatemala is even more interesting, and shows marked differences, which make it more truly a local product. Being primarily an agricultural country, it did not have the mineral wealth of Mexico. By the end of the sixteenth century, however, its capital, Santiago de los Caballeros, had eighty churches, most of them attached to convents or monasteries. Even the great haciendas had churches, often also planned as fortresses. Earthquakes and changing economic conditions have changed some formerly wealthy districts into poor settlements, but the churches often remain, sometimes only in charge of lay brothers. Archives are generally lacking, and some places are now very remote and inaccessible. The first capital of Guatemala, Almolonga, was founded in 1524. Its first Cathedral was completed in 1539, but the present edifice was rebuilt by the Franciscans much later. It can be compared with La Soledad in Oaxaca in Southern Mexico, for striking similarities and differences. Santiago de los Caballeros, the second capital of Guatemala, now known as Antigua, is called by the writer "an architectural museum *en plein air*."

Many of the churches are in ruins, such as Santa Cruz, one of the earlier examples, and El Carmen, which in its present form dates from 1728. Perhaps the most important is the Cathedral, begun in 1543, and enlarged in 1680. Work on it was continuous, and it may not have been completed at the time of the earthquake of 1773. The building was the religious center of the whole region, the seat of the archbishop, and the final resting-place of many of the great names of the colonial epoch. In its façade one can see elements of every period of Baroque decoration. The greater part of the interior is in ruins, but is of vast scale. A late church in Antigua, dating in 1760, is *Nostra Señora de la Merced*, which shows the exuberant Baroque still flourishing, in contrast to the sober and frigid ecclesiastical architecture then prevailing in Spain. Of provincial churches, that of Chiquimula is "first-class Baroque." This town, in viceregal times, was the seat of the provincial Vicar. The church of Camotan, the last settlement before Honduras is reached, is fine Baroque, but the settlement is now poor and forlorn. In Northwestern Guatemala, the Calvario church at Chichicastenango "signalizes the end of the road in stylistic simplification" and can be compared with the church at Panchimalco in Salvador, showing that "the borders of the countries of Latin America—signified artistic as well as topographical differences." The town of Panajachel had five churches at the end of the eighteenth century. Of the parochial church, only the façade and main walls remain, but it is an eloquent reminder of seventeenth-century architecture, built in 1641. More obviously Baroque is the village church at San Antonio Aguas Calientes, four miles from Antigua. After the earthquake of 1773, the capital was moved to its present site at Guatemala City. The finest church is that of Santo Domingo, begun in 1782 and finished in 1808, a skilful blending of Baroque and Neo-Classical elements. Thus from the Cathedral at Almolonga to this church, we can follow the development of Latin-American ecclesiastical architecture.

**Mexican Colonial Sculpture.**—In *GBA.* ser. vi, xxv, 1944, pp. 49-58 (16 figs.) MANUEL ROMERO DE TERREROS discusses Spanish colonial sculpture, particularly in ecclesiastical art, in Mexico. Ornamental sculpture was most abundant, and always forms a part of the façades of churches and other ecclesiastical buildings. During the sixteenth century the predominating sculpture of



buildings was inspired directly by Spanish monuments. In the seventeenth century, this developed into what may be called "Mexican Baroque," which in the eighteenth gave way to the "Churrigueresque," an exaggeration of the baroque. Towards the end of the eighteenth century, a reaction against overornamentation set in, and classic forms began to make their appearance. In all times, however, sculpture in Mexico retained a local color, as the stone-cutters were Indians, who tended to follow the dictates of their ancient art, and consequently pre-Hispanic influence is often clearly visible. Perhaps the finest example of high relief in Mexico is the panel over the entrance of the old church of San Agustín in Mexico City, but the reliefs over the portals of the Cathedral in the same city are almost equally fine. All belong in the seventeenth century. Ornamental carving on columns and pilasters is very common. The church of Sta. Monica in Guadalajara, and the cloisters of the old monastery of La Merced in Mexico City are illustrated as examples. In wood-carving, the most important work in the seventeenth century was on choir-stalls, such as those of the monastery of San Agustín at Mexico City. In the eighteenth century, the acme of ornamental carving, both on stone and wood, was reached. The façade of the church at Tepotzotlán is illustrated to show its quality. This sumptuousness also applies to public buildings and fountains as well as churches, but it is especially to be found in the *retablos* or *reredos* of Mexican colonial churches. In the field of sculpture in the round, statues of saints in wood were made for churches, and also for private worship. This is in pure Spanish tradition, but was not so fine as in the mother country. In the eighteenth century, schools of sculpture existed in Puebla, Mexico City, and Querétaro. Of Puebla, the principal sculptors were José Antonio Villegas (1713-1785), Zacarías Cora (1752-1819) and José Villegas (1760-1821); for Mexico City, Manuel Tolsá and Pedro Patiño Ixtolinque; and for Querétaro, two pupils of Tolsá, Mariano Arce and Mariano Perusquía. Of these sculptors, Manuel Tolsá was easily the greatest. He was born in Spain in 1767, came to Mexico City in 1791, and died there in 1816. He was also an architect, and designed the School of Mines in Mexico City, one of the finest public buildings in the place. His best-known work of sculpture is the colossal bronze statue of Charles IV in Mexico City, "undoubtedly the finest equestrian statue in

America," unveiled in 1803, and fortunately preserved during the War of Independence. His finest works in stone are the Faith, Hope, and Charity on top of the clock in the Mexico Cathedral. He appears to have been somewhat influenced by the work of Bernini.

**Mexican Colonial Retablos.**—The altars of Mexican churches in Colonial times were always provided with a reredos or *retablo*, that of the high altar being called the *retablo mayor*, the other altar-pieces being *retablos colaterales*. These *retablos* are studied by FRANCISCO DE LA MAZA in *G.B.A.* ser. vi, xxv, 1944, pp. 175-186 (11 figs.). They extend from the sixteenth to the eighteenth centuries. In many cases they are so numerous that one cannot see the walls of the church. The earliest (now destroyed) was made for Cortés in 1519. Many of the earliest examples were made by Indians, under the direction of Franciscan, Dominican, or Augustinian friars, and with the help of apprentices trained in the school established in Mexico City by Fray Pedro da Gante. The earliest were painted rather than carved, and the influence of Spanish Late Gothic is evident. By the end of the sixteenth century a Renaissance style appears, while Baroque usurps everything in the seventeenth, and by the end of the eighteenth "turns into luxury and extravagance, and becomes a folly." Toward the end of that century, Neo-Classicism asserts itself, and the use of wood, forbidden by decree of Charles III in 1790, yields to marble and plaster, with a cold, academic decoration. These *retablos* must therefore be considered as architectural, as well as sculptural or pictorial. The earliest to be illustrated in this article, that of the church at Huejotzingo, is Renaissance, and its sculptured niches are set off with classic columns; it is dated in 1586. In the same town, in the Franciscan church, is an example where Renaissance and early Baroque are successfully blended. The Baroque *retablos* can be distinguished by the use of Salomonic columns, and can be divided into three categories: (1) those with paintings alone, (2) those with sculpture alone, and (3) those with painting and sculpture combined. The late Baroque, or Churrigueresque, examples all have the estípite pilaster with countless variations in design. For examples of Baroque, the writer illustrates *retablos* from Meztitlán, and from the chapel of Los Angeles in the Cathedral at Mexico City, dated in 1713. Very late (ca. 1720) in the true Baroque is Tepeyaco, Tlaxcala. For



Churrigueresque, he illustrates the churches of Tepozotlán and Tasco, and various specimens in the Cathedral at Mexico City, where the *retablo* of Santa Rosa shows the advent of Neo-Classicism.

### FAR EAST

**India.**—*Smithsonian Inst., War Background Studies* no. 18, 1944, (86 pp., 21 pls., 3 maps, 5 tables) is devoted to a scholarly essay on *Peoples of India*, by WILLIAM H. GILBERT, JR., of the Library of Congress. The Introduction and opening sections on Geography, Climate, Fauna and Flora, etc., need not concern us. The second section (pp. 13-59) is of more interest. Its first sub-section deals with archaeology. The existence of man in India has not been traced prior to the period of the Ice Age. Typological equivalents of European Upper and Lower Palaeolithic flints occur in India, but there is no stratigraphic succession. Implements reminiscent of Chellean and Acheulean types have been found. Of the Neolithic age, the remains in observed sites are separated by a wide gap from Palaeolithic. Ground and smoothly polished implements are characteristic. Copper objects have been found over a wide area, but bronze articles are scarce. In Southern India and Ceylon, the Stone Age seems to have passed directly into the Iron Age. In 1922, the remains of the Indus civilization began to be uncovered. The culture shows affinities with Sumerian. It was based on bronze tools, and is characterized by wheel-made pottery, and a remarkable standard of sanitation in the construction of houses and other buildings. The Iron Age in India is associated with the historic Vedic period in the north, and with the Dravidians in the south. Architectural remains show the existence of different periods of development within historic times. Dressed stone work was introduced ca. 250 B.C., during the Buddhist period, and shows Greek influence. During the Sunga period (180-70 B.C.) much noteworthy construction (listed) occurred. In the fourth century A.D. came the well-known Gupta period, in which three styles of architecture emerged: (1) the Indo-Aryan, of Hindustan, with curvilinear spires above a square sanctuary, as in the Jain temples; (2) the southern, or Dravidian, characterized by pyramidal towers, rising story upon story in horizontal levels, and crowned by a domed roof; and (3) the Chalukyan, combining features of the other two. With the coming of the Moslems ca. 1200, a new form of architecture

arises, consisting of domes and pointed arches—the Taj Mahal is the supreme example. The sub-section on material culture deals, naturally, with modern conditions, but points out the importance of cotton from time immemorial as wearing apparel, and of the temples and royal courts as centers of art. In the matter of racial types, it is conjectured that the earliest inhabitants of India were Negritos, similar to the Andaman Islanders of today. Some still survive in the forests in the extreme south. At present there are types reminiscent of the Mediterranean, Nordic and Alpine types of Europe, and in the parts adjoining Burma and Tibet, Mongols are found. In northwest India, from the fourth millennium B.C. evidence shows that a long-headed race with high cranial vault and narrow, prominent nose, has been in occupation, alongside another long-headed racial type of powerful build, and lower cranial vault. Armenoid types also appear. The organization of industries into guilds, which still persists, can be traced back to ca. 600 B.C., in the Buddhist era; this later included artisans and craftsmen. There is a long sub-section dealing with the history of India. The Vedic Indo-Aryans arrived in the country ca. 1800 B.C. Other racial groups arrived in the beginning of the Christian era, while Mohammedans—Persians, Arabs, Turks and Mongols—came in great numbers ca. 1200 A.D. This part of the essay is followed by a chronological table of the principal events in Indian history from the Old Stone Age to the year 1770. The section on history is followed by sections on government, and the political areas of today. Of some interest to our readers is the sub-section on Languages. It is estimated that no less than 179 languages are spoken in India, subdivided into 544 dialects. This section is accompanied by a linguistic map, giving 81 major languages, which fall into four main groups—Indo-European, Munda, Dravidian, and Indo-Chinese—while a fifth non-classified group is largely confined to Ceylon. A good account is given of where, and by whom, these languages are spoken. Another important section deals with Religions and Sects. The principal religions are Hinduism with 225,000,000 adherents, and Mohammedans, with 94,000,000. A long and excellent description of Hinduism, which is derived from the early Vedic and Brahman cults, is given, with its various manifestations, and the geographical distribution of the different cults. There are 6,000,000 Christians,

divided into all the different sects, of which Roman Catholicism has the largest number of adherents. The Parsees, a very small number, derive their faith from the Zoroastrianism of Persia, from which their ancestors came when Persia was conquered by Islam. In the field of art, besides the mention of architecture and sculpture in connection with archaeology, history and religion, mention is made of music, the drama, literature, and the dance, principally in their modern forms. There are still areas in India, however, other than those mentioned above, that are occupied by the aboriginal peoples. The rest of the essay is devoted to a long study of the caste system, with accounts of some of the outstanding groups, and a classification table. In conclusion, there are several pages summarizing India's contributions to civilization and to the war effort. A selected bibliography is appended.

**Dancing Siva at Toronto.**—In *GBA.* ser. vi, xxv, 1944, pp. 59–60 (2 figs.) F. ST. G. SPENDLOVE publishes a bronze figure of the Dancing Siva in the Royal Ontario Museum, dated probably in the twelfth century, at the end of the period of the Chola power in South India. It is large and absolutely complete, being over 40 in. high. The god is dancing within a wheel, which is the Hindu conception of life. While in the normal pantheon Siva is the third person, with Brahma and Vishnu, of the Hindu trinity, in South India he had a special cult as the Supreme Lord of all life. The dance which he is performing within the circle is the five-fold Dance of Life. The four arms symbolize creation, preservation of life, the destroying element in nature, and rebirth. One leg symbolizes rest, the other, salvation; and he stands on a small figure, typifying his conquest of evil. From each side of his head radiate seven streams to show his creation of the sacred river Ganges from seven streams. "The dance of Siva therefore expresses the cycle of life."

**Chinese Bronzes.**—In *The Art Bulletin*, xxvi, 1944, LUDWIG BACHHOFFER discusses the stylistic and chronological development of Chinese bronzes of the Shang and Early Chou periods. He traces the evolution of the shape and the decorative motifs, and the relation of the ornament to the vessel in several different types, especially the *yu*, the *ting* and the *kuei*.

**Human Pair in China and Russia.**—ALFRED SALMONY publishes, in *GBA.* ser. vi, xxiv, 1943, pp. 321–326 (5 figs.) a Chinese bronze casket, now in the Fujii collection in Kyoto, which he dates

in the Late Eastern Chou period (ca. 600–221 B.C.) and which has on its lid a pair of figures in the round, one male and one female. To this he also adds a fragment in the Field Museum in Chicago, with similar figures, and which he dates in the same era. He then publishes two Sarmatian bronze cauldrons, one in the Museum of Odessa, and one in that of Irkutsk, belonging to the third or second century B.C., likewise decorated with pairs of male and female figures, and believes that this form of decoration came to South Russia over the Eurasian steppes from China.

**Two Chinese Paintings.**—KOJIRO TOMITA publishes, in *BMFA.* xlii, 1944, pp. 13–20 (7 figs.), two paintings depicting the infant Buddha with his foster-mother Mahāprajāpatī. This aspect of the life of the Buddha is not commonly represented in art, while scenes of his birth to his real mother, Mahāmāyā, are relatively frequent. Mahāmāyā, according to the legend, died seven days after giving him birth, and his father King Suddhodana, acting on the advice of the Śākya nobles, selected Mahāprajāpatī to rear the child, assisted by thirty-two selected nurses. She was the maternal aunt of the Buddha, being the youngest of eight sisters, of whom Mahāmāyā was the eldest. The first of these paintings is a scroll on silk, by Wang Chên-p'êng, and belongs in the early fourteenth century. The scene is laid in an apartment of the palace dedicated to be the abode of the royal offspring. The other is a large wall painting, and the composition is similar, except that it is devoid of architectural elements, being filled instead with cloud patterns. Of the later history of Mahāprajāpatī, little is recorded, but she ended her days at an advanced age, three months before the Buddha entered Nirvana, as the leader of the nuns of the Buddha. The scroll painting was attributed by the distinguished scholar Hsing T'ung (b. 1551) to Li Lung-mien, a celebrated artist. He attached his attribution in an inscription on the right of the scroll; but a later critic, Ch'ien Ta-hsin (1728–1804) discerned the signature of Wang Chên-p'êng, and reports it in another inscription on the scroll. This signature is very minute, and appears on the trunk of a tree at the left of the painting. Little is known of the artist, except that he was a favorite of the Emperor Jên-tsung (reigned 1311–1320). Before coming to Boston in 1912, this painting had been in the collection of Ching Hsien at Peiping. The wall painting is much larger than the scroll, its dimensions being 9 ft.

1 in. high by 11 ft. 4 in. wide, and the figure of Mahāprajāpatī being considerably over life size. Whereas the scroll is in monochrome, the wall-painting is in colors that at one time were very brilliant. Its date is fixed by an inscription in 1551. It was brought to America in 1927, and before being acquired by Boston in 1936, was in the studio of the late George Grey Barnard. The style is that of the Ming Dynasty, and the date given by the inscription confirms this impression.

### U.S.S.R.

**Kirghiz.**—During 1944 the Kirghiz Branch of the Academy of Sciences has organized a systematic historico-archaeological investigation of the little known upland regions of Tian Shan, which were once populated by the ancient pastoral tribes of Central Asia. An expedition led by Bernshtam is leaving shortly after May 16 for the Atbashinskaya and Aksaiskaya valleys to excavate several sites of ancient urban settlements, encampments, and burials.

During the past decade the Nicholas Marr Institute for the History of Material Culture (IIMK) has coöperated with the local organizations of Kirghizia and Kazakhstan in a series of historico-archaeological investigations of the "Seven Rivers" region. Ten large-scale expeditions led by Bernshtam have excavated dozens of ancient and mediaeval cities and hundreds of tumuli. Tens of thousands of valuable finds have been made (*Izvestiia*, May 16, 1944).

**Symbolism of Russian Icon.**—In *GBA*. ser. vi, xxv, 1944, pp. 77-94 (17 figs.) NATHALIE SCHEFFER studies the spiritual value of Russian religious art, the motives of its creation, and its poetic diction. "The icon by itself is a prayer—in which the artist expresses his pious feelings. The icon therefore is neither a portrait nor a picture. It is a symbolic image. Its essence is only spirit, not flesh." When Russia adopted Christianity in 988, she also adopted its religious art as expressed in Byzantium, and followed the Byzantine patterns blindly. It was not until several centuries later that a national creative religious art came into existence. The beginning of this art was in the thirteenth or fourteenth century, and became an interpretation of the faith of the Greek Orthodox Church, in that, by looking at icons, the illiterate could follow the principal prayers. Icons can be divided into "prayer," "festival," "dogmatic," and "educational" classes, to which may

be added purely symbolic icons, reflecting the philosophy of their time. These latter were highly esteemed in the sixteenth and seventeenth centuries. The iconographer was aided by Manuals, which guided him in the correct representation of the saints and apostles. Thus St. Nicholas is known by his exceptionally flowing beard and hair, a mark of beauty and esteem in Russia from the earliest times till the eighteenth century. No Russian who shaved his beard was regarded as either a true Russian or an Orthodox Christian. Thus the longer the beard, the more saintly the figure in the icon. On the other hand, demons are always clean shaven, Satan only excepted. The length of the beard and the treatment of the hair for every saint is prescribed in the Manuals. For the backgrounds, simple architectural formulae were used to denote churches, buildings, cities, etc. Although as early as the fifteenth century Western influence appears in Russian literature and art, the icons remained unaffected by it for over two centuries. It appears first, perhaps, in the frescoes of Iaroslavl churches, of the late seventeenth century, but the reforms of Peter the Great dealt Russian iconography its *coup de grâce*, although it lingered on with some concessions to modernity, which were necessary to satisfy the people. These concessions, however, disturbed the original mystic character of the painting. For an illustration of the symbolism of the representations on the icons, the writer discusses the subject of the Last Judgment at some length, and with numerous illustrations, taken from icons and paintings in churches and public and private collections. This subject is of importance as symbolizing the triumph of Christianity over heresy, teaching Christians how to govern their conduct, and because, according to tradition, it was this subject that effected the conversion of Prince Vladimir to Christianity and the introduction of the new faith into Russia. It is certain that among the earliest religious paintings in Russia, this subject is one of the most frequent, and was particularly common on mural paintings. The various symbols employed in these paintings are then described and explained at some length. The influence of the Book of Revelation was negative in the earlier paintings, and does not come into its own until the seventeenth century—previously the Last Judgment is drawn from Old Testament sources. In all Russian religious art, much emphasis is placed on the punishment of sinners, and the wickedness and final evil fate

of imps and demons; but Satan is always "big and fat and dangerous" and is apt to ride a double-headed monster, who vomits a serpent, typifying the River of Fire. Other favorite subjects are Christ the Pilgrim, showing His return from earth to heaven, and finally, after the seventeenth century, scenes from the Apocalypse.

**Icons in New York.**—During the winter of 1944, the Metropolitan Museum held a loan exhibition of Russian icons from the collection of George R. Hann, of Sewickley, Pennsylvania. These are discussed by ANDREY AVINOFF in *BMMA*, n.s. ii, 1944, pp. 229-232 (3 figs.). The collection was made during the years 1935-37, and includes outstanding examples from Russian galleries and

former private collections. Signalled out for special consideration are an icon showing two Sts. Macarius (of Alexandria and of Egypt) formerly in the Tretyakov Gallery, and attributed to the great fifteenth century icon painter Rublev; a fourteenth century icon of the Old Testament Trinity; a sixteenth century group, forming a *Deësis*, of the School of Novgorod; and two other examples of this same school, a magnificent Transfiguration, and a St. George. Every school, however, is well represented, and groupings by a common hand can be made. This collection is one of the most important outside Russia, and its appeal is outstanding, both to art lovers, and to research students.

### Erratum

Lines 31-33, col. 2, page 79, vol. xliii, should read: "A number of friends who decided to remain anonymous founded a life fellowship in her honor at Girton College, Cambridge University."

## BOOK REVIEWS

CLASSICAL STUDIES IN HONOR OF WILLIAM ABBOTT OLDFATHER. Presented by a Committee of His Former Students and Colleagues. Pp. vii + 217, pls. 7. University of Illinois Press, Urbana, 1943. \$4.00.

This diversified volume is published by the University of Illinois Press, under the auspices of the Graduate School, in commemoration of the seventy-fifth year of the University of Illinois. As a classicist who is only one month his senior, I should like to offer congratulations to a distinguished colleague who was a professor in the American School of Classical Studies at Athens in 1937-38. We all wish that he may live many more years to carry on his great work. His long classical career has encouraged important research in various fields, and he himself and many of his students have attained international fame. His own broad interests and many projects and the indexes which he has inspired have aroused the admiration of all. The volume contains seventeen meticulous and scholarly articles varying greatly in length but without a much needed index. Kenneth Abbott's article "The Grammarians and the Latin Accent" brings important linguistic evidence to bear on the old dispute whether the accent was one of pitch or stress. Lloyd Daly makes a valuable contribution on "The Entitulature of Pre-Ciceronian Writings," in which he proves that the "copyist or bookseller was the person responsible for many of our traditional titles" (p. 31).

Aubrey Diller, who has done such brilliant work on Strabo manuscripts and the oldest manuscripts of Ptolemaic maps, shows that "The Anonymous *Diagnosis* of Ptolemaic Geography" belongs to the thirteenth or fourteenth century. Clarence Forbes writes on "Accidents and Fatalities in Greek Athletics," an interesting paper even if it shows an out-of-date knowledge of archaeology. However, he does not say that Ladas died in crossing the line but "he collapsed right after his victory and died on the way home to Sparta." He might have mentioned Myron's statue of Ladas at Argos and that he was an Argive, cf. *Sitz. Sächs. Ges.*, 1900, pp. 329-350, and he spells *Scythians* as *Sythians* (p. 54). For a vase in Würzburg one should not refer to Gerhard but to Furtwängler-Reichhold or Hoppin's *Euthymides and His Fellows*, 1917, p. 54,

pl. xii, or best to Langlotz, *Griechische Vasen in Würzburg* i, p. 54, no. 297, pl. 85. There are no references to the *Corpus Vasorum Antiquorum*. For example, for gouging in the pancratiun, cf. *CVA.*, Robinson Coll., Fasc. 2, p. 19, pl. xviii.

Marian Harman's article "Classical Elements in Early Printers' Marks" is interesting to archaeologists, and those who like to trace the "fortune" of classical designs through Christian art and literature, and see how many classical ideas were clothed in mediaeval artistic form. A Roman coin provided Aldus Manutius with the pattern for his dolphin and anchor mark. Even the canting idea as seen on Greek coins of Melos, Rhodes, Selinus, etc., occurs in representing the name Gryphe by a griffin.

A real archaeological and scholarly contribution to the volume is the brilliant and decisive article (with six plates) of F. P. Johnson, "A Pelike Painted by Hermonax." It was found in Rome and originally given by Mr. Warren to Professor Tarbell and now is in the University of Chicago collection. Two fragments in Heidelberg belong to the vase, which out of 102 pieces assigned by Beazley to Hermonax is more likely than any other unsigned vase to have been his own work. The interpretation of the scene is uncertain. The group of Hermes shaking hands with the white-haired king (Minos?) certainly resembles that of Theseus and Poseidon on my unbroken crater (*CVA.*, Robinson Coll., Fasc. 2, pls. xxxi-xxxiii). The seated woman with the spindle might be Ariadne (p. 78, wrongly spelt *Adriadne*). Theseus could hardly be represented in the guise of Hermes, but an interpretation as Aegeus and Theseus is no more satisfactory. In view of the altar, possibly the scene represents an ephebe taking the famous ephebic oath in the sanctuary of Aglaurus in the presence of Zeus or a personification of the Council of Five Hundred, of Thallo, Auxo, and Hegemeno. Often an ephebe is represented with the petasos. On the famous vase in the Hermitage we have an altar, an old man (representing perhaps the Council) and the ephebe (cf. *DS.* s.v. *ephebi*, p. 624, fig. 2677).

Richmond Lattimore's learned article on "Aeschylus on the Defeat of Xerxes" finds falsification of history in Aeschylus, but despite Lattimore's very keen and scholarly treatment of an



old theme, some will prefer to Herodotus the account of a contemporary eye-witness who fought at the battle of Salamis. Naturally for Aeschylus the defeat of Xerxes was Salamis and the victor was Athens; that was the simple tale, and he meant to make it live. L. R. Lind writes on "Roman Military Exemption," a timely article showing many anticipations of modern army practices. Few Romans attempted to evade service, and fewer still succeeded in evading it. Vespasian is one of the few who got exemption because of weak eyes. Dependents were no proper reason for exemption, and no clear case of exemption for physical disability is recorded, although exemption was, of course, granted for this cause. Lind might have called attention to cases of mutilation of fingers to avoid service (Ammianus xv, 12, 3; Suetonius, *Aug.* xxiv, 1). Character was necessary, and actors were often exempted because their profession was *infamis*. Green, in *CP.* xxviii, 1933, pp. 301-304, ably defends the usual view against Frank's conjectural idea in *Life and Literature* that early actors were not slaves and that the loss of status was connected with the deterioration of the drama itself. Montgomery's article on "The Development of Humanitarianism in Roman Law" is a detailed study and shows that punishments inflicted in the later empire were extremely savage as contrasted with the early empire.

Another archaeological article is the learned and exhaustive study of "The Lykaian Altar of Zeus" by G. E. Mylonas. Pausanias describes it as a mound of earth having in front two pillars with gilded eagles. The very altar was located by Kourouniotes, and the bases of two columns found. They are Doric and belong to the fifth or fourth century B.C., but replaced older wooden columns of Late Helladic times. Here developed the type of Zeus with the eagle which spread to Olympia and elsewhere. Oliver's article on "Petrarch's Prestige as a Humanist" discusses the decline of Petrarch's influence. Pease's concise and conclusive discussion of "Indirect Discourse in Caesar" should be used by every teacher of elementary Latin. There are three good manuscript articles, B. E. Perry, "On the Manuscripts of the Philogelos;" R. C. Stone, "Some Remarks on the Provenience of the Codex Bezae;" J. B. Titchener, "The A-Family in the Text Tradition of the Anonymous *Liber de Viris Illustribus*." Alfreda Stallman's treatment of "The Influence of the Greeks on Nietzsche" shows the influence of the

earlier periods of Greek culture and of the Pre-Socratics on Nietzsche, who ranked Epicurus higher than Socrates. Nietzsche undertook to make Greek tragedy the symbol of Greek life and Wagnerian opera its modern counterpart.

The volume closes with Mrs. M. T. Honey's article "The Influence of the Classics on Camões' *Lusiadas*." It is a condensed and compressed tabulation with hundreds of references to much material. The epic poet Camões, who lost the sight of one eye in Africa (1525-1580 A.D.), followed the Homeric tradition, though he did not know Homer in the original. With Vergil he was extremely familiar, as well as with astronomy, ancient history, mythology, and geography. He was a humanist in the true sense of the word.

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PINDARI EPINICIA, ed. *Alexander Turyn* (Polish Institute Series No. 5). Pp. xiv + 224. Polish Institute of Arts and Sciences in America. Herald Square Press, New York, 1944. \$5.00.

This new edition of Pindar's epinician odes is based on a re-examination of the mss., and on the conclusions drawn from a fresh study of manuscript authority. The editor's views, formally and more fully expressed elsewhere, are briefly set forth in the introduction. The text is set up with double commentary, the first dealing with parallels and cross-references, the second with variant readings and corrections.

Dr. Turyn accepts the fundamental division of the manuscript stemma, but makes A the sole representative of the Ambrosian line, relegating all others to the Vatican family. While allowing the general soundness of his scheme, we may remark that a great deal in the way of manuscript relations has not yet been cleared up. In particular, the student who reads Dr. Turyn's description of ms. C, and then proceeds to study the text, will remain somewhat bewildered alike concerning its affinities and its value; for C may give good readings apart from A or B (eg. *Ol.* vi, 7), and again A and C frequently stand together, rightly or wrongly, in opposition to all other manuscripts. "C ist also kontaminiert mit einer Vorlage von A" says Maas (*Gnomon* 9, 1933, 168). Certainly that, or something like it; but we hear not a word of this from Dr. Turyn, who has indeed given the impression that he believes C has nothing to do with A (see *Philologus* 90, 1935, p. 116). This is confusing, and quite needlessly so in view of Dr.

Turyn's unparalleled knowledge of the manuscripts.

The text in detail has been soberly handled. Dr. Turyn contributes a number of new readings, which are generally acceptable, and almost always show taste and learning. We find little or nothing that is sensational, which is all to the good. In fact, the surprising thing about the condition of Pindar's odes is the general soundness of so difficult a text even where the most authoritative manuscripts have vanished.

The commentary which is concerned with reference and cross-reference is impressive in its erudition, although a few obvious parallels have been overlooked. For example, for *Ol.* II, 17-19 the citation of Schol. Sophocles, *Trach.* 742 is inadequate. Surely it would be more illuminating to cite Simonides, fr. 54, Diehl; Agathon, fr. 5, Nauck<sup>2</sup>; and Plato, *Prot.* 324b. But such flaws of omission are small, and perhaps necessary, and do not bring in question the solidity and value of Dr. Turyn's work. It is a pleasure to look forward to his promised edition of the Pindaric fragments.

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THE LAW OF GRECO-ROMAN EGYPT IN THE LIGHT OF THE PAPYRI, 332 B.C.-640 A.D., by *Raphael Taubenschlag*. Pp. xv + 488. Herald Square Press, Inc., New York, 1944. \$12.50.

Whether or not there is such a thing as "Papyrological Law," whether, that is to say, it is methodologically legitimate to treat Greco-Roman Egypt as a legal entity, with a history and development of its own, has been much debated, and the answer is not clear. The fact that we know so much more about the inhabitants of Egypt than those of any other part of the Ancient World for a like period makes the question academic. It is in Egypt alone, except for occasional brief epochs, that we can see the workings of the law in the life of individuals. Codes and legal principles we meet from time to time, and a number of special enactments, but the bulk of the material occurs in the documents and records of the people themselves. This only the trained papyrologist can master and handle, and the jurist who would deal with it must be familiar, likewise, with the Greek and Egyptian legal systems, as well as with classical and especially post-classical Roman law. Of the many jurists who have dealt with special problems among the papyri, and of the many papyrologists who have had to handle

legal questions in the editing of texts, there have been very few capable of speaking with authority in both fields. One thinks with reverence of Ludwig Mitteis, the brilliant pioneer in the field of provincial Roman Law, whose collaboration with Ulrich Wilcken in 1912 produced the most influential of all books on papyrology, the great *Grundzüge und Chrestomathie der Papyrskunde*. As a handbook and guide in constant use, the four volumes of this work stimulated and directed research in Europe and America, and additional publication of texts proceeded rapidly. By 1938, when Professor Taubenschlag undertook his project of a systematic exposition of the Law of the Papyri, the discipline had come of age.

The present volume is a notable achievement, accomplished in three countries and during six years of world conflict. It is otiose to compliment the author. America is fortunate in having made possible the completion of the work. In four chapters are set forth what we know of the general problem (Egyptian, Greek, and Roman Laws in Egypt and their mutual relations and influence), Civil Law, Criminal Law, and the action of the legal instrumentalities. The notes are full, covering both texts and literature, and the Table of Sources and Index of Subjects (in three languages) occupy almost sixty pages. A bibliography of the author attests his wide competence. Appreciation must be expressed of the work of the Herald Square Press and of the generosity of the unnamed sponsor which made possible so complete a publication under war conditions.

The utility of the book and the advance which it represents will be immediately apparent to all users. Some topics have been relatively clear, or at least not the subject of controversy, but others have been infinitely debated. I may mention the problems of the nature of Greco-Egyptian marriage, of the registration of property, of the acquisition of property (sale and the *καταγραφή*), of the validity of contracts, of negotiable instruments, of attachment, foreclosure, and enforcement of judgment. On all these subjects the most varied opinions have been held, and argument has been hot if not always profitable. To all of them the author brings simplicity and clarification. His approach is practical and sensible. One may understand what he means, not always true of others. This is, in my opinion, the principal merit of the book, a quality which it shares with the *Grundzüge* of Mitteis. To many problems, the author brings nothing new, but he integrates

them into the broad pattern of the legal structure and development of the area. He will not bring an end to divergent opinions, but he has provided a new starting point for them.

Egypt is a peculiarly interesting field for the study of the interrelation of varying legal systems. The Greeks coming into the country in the fourth and third centuries B.C. came into a land with a fully developed legal system, while at the same time they brought with them their own political conception: law was a matter of citizenship rather than domicile. Thus in their administration, the early Ptolemies were confronted by the problem of one Egyptian and several Greek legal systems, not to mention the native practices of Jews, Persians, Syrians, and other foreign elements. They adopted the easiest and perhaps the only possible policy. They allowed each group to follow its individual system as far as concerned the relations of the members of that group to each other. Royal enactments, *prostagmata* and *diagrammata*, regulated the dealings of the groups with each other and with the crown. The Egyptian group, as the most numerous, continued its most characteristic practices well down into Roman times, and in a few cases prevailed in late Roman law, as when Leo recognized as valid marriages between free men and slaves. The cities, Alexandria principally, continued their own codes, but between the Greeks of the chora and the natives, a selective process set to work and many institutions were exchanged, bringing the two systems nearer together. The Romans brought in their own law for Romans, but recognized and probably codified the local systems, resolving conflicts by imperial constitutions or prefectural edicts. Again, however, a selective process of borrowing set in, not seriously interrupted by the Antonine Constitution. By the time of Justinian, Egypt represented, in most respects, a legal unity.

In a study of this nature, terminology is peculiarly difficult. Whether clearly defined or not, terms have connotations which may mislead, or be in fact incorrect. So far as possible, the author uses the labels of classical Roman law, supplementing them by Greek terms when there is no Roman equivalent. This is unobjectionable. In other cases he employs the terms of the English common law, probably the best practice so long as they are applicable. In some cases, a revision would have been desirable, although in general the author handles English very well.

Thus the adjectives "immovable" and "movable" for real and personal property are not fortunate. Neither is the expression "suspensively conditioned sale," where only a knowledge of the German idiom explains the meaning; "conditional sale" would do. The "secret" defects of animals would be better described as "hidden," and "muttons" (p. 358; for "sheep"?) is lamentable. These are, of course, superficial defects, but regrettable in a book destined to be widely read and quoted. And misprints are not uncommon, and *lapsi calami*. On page 172, "The παραχώρησις followed an ὑπόμνημα" should read "was followed by," and on page 173, "possession and ownership" should be "ownership and possession," to fit the κυριεία καὶ κράτησις just before. The verb κυριεύειν means to be κύριος, "lord" or "owner" of something, though as has often been observed, κύριος does not mean absolute owner in the sense of dominus. One's property is not dominium, in the Greek thought, but τὰ ὑπάρχοντά τινι.

The documentation is full and exact, so far as I have checked it, and the references are relatively complete. Two minor corrections may be made, however. The Tean inscription SIG.<sup>3</sup> 344, cited page 337, note 73, has been treated by Adolph Wilhelm (and by the reviewer) extensively, subsequent to Dittenberger's third edition; the passage cited has nothing to do with βία, and refers to the formal summoning of a missing litigant so that a judgment in default may be secured against him. And on page 343, notes 122 and 123, the author cites inscriptions of Lusius Geta and Tiberius Julius Alexander according to the edition of Dittenberger, *OGIS*. Both texts are reedited and improved by J. H. Oliver in the Metropolitan Museum publication of the Oasis of Khargeh (1939). The former is actually an edict of the prefect Gn. Vergilius Capito; in the latter, the line reference is wrong (116/7 should be 58/9).

It would be pleasant to discuss at length detailed problems of Egyptian law to which the author has brought light and order. And there is a question whether their treatment is complete without consideration of the lists of testimony furnished here and there by the Dura material. But this is neither the place nor the time. I shall come to them elsewhere, greatly benefited by Taubenschlag's excellent handling. He has built well.

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A MYSTERIOUS LATIN INSCRIPTION IN CALIFORNIA, by A. E. Gordon. University of California Publications in Classical Archaeology, Vol. 1, No. 13, pp. 313-356, plates 41 and 42. Berkeley and Los Angeles, University of California Press, 1944. \$5.00.

This is a publication of one of the rubs in the collection at the University of California. The most recent previous appearance of the inscription in question was in Donati's Supplement to Muratori's *Thesaurus*, in 1775. It is a metrical epitaph, consisting of five *senarii*, in memory of an eleven-month-old child. Brief as it is, the epitaph has numerous interesting features, in particular, several phrases (*hic conquisceit, anima superis tradita, amicus omnibus, and acceptum lumen reddidit*) which place it in the category of epitaphs possibly, but not necessarily, Christian, since all these phrases have Christian connotations and associations, yet cannot be proved to be of exclusively Christian character. Moreover, as the editor points out, the explicit symbolism and phraseology of Christian epitaphs are lacking. These facts suggest that the epitaph may be "crypto-Christian," but only suggest it, since the characteristics and even the existence of such a category remain imperfectly demonstrated. Professor Gordon's conclusions are accordingly somewhat negative—a fact which does nothing whatever to impair the great value of this study. The publication has been carried through with the patient thoroughness and wide range of reference characteristic of the finest epigraphic studies; the editor seems to have overlooked absolutely nothing; and if the amount of detail and context may seem at first sight to be unnecessarily full, yet it is only by such exhaustive working out from specific texts that our knowledge of such doubtful fields as that of crypto-Christian epigraphy can be confirmed and enlarged.

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A HANDLIST OF ILLUMINATED ORIENTAL CHRISTIAN MANUSCRIPTS, by Hugo Buchthal and Otto Kurz. Pp. 120, frontispiece. London. The Warburg Institute, 1942. 15 m.

The handlist which the two authors have published as Vol. 12 of the *Studies of the Warburg Institute* constitutes a first and successful attempt to collect the illuminated East Christian manuscripts other than Greek up to the year 1500 together with the chief bibliography about

them. It comprises as completely as possible the manuscripts with figural compositions, but those with ornamental decoration only in accordance with their importance and elaboration from the artistic point of view. Whoever has worked in this field and knows how scattered is the material as well as the references to it, will greatly appreciate the task accomplished by these two authors.

The limitation of the list to manuscripts prior to the year 1500 is based on Buchthal's and Kurz's notion "that after the fifteenth century the main stream of Byzantine art ceased," and that "this date marks, moreover, a decisive break in the tradition." Although it is to be admitted that the production of East Christian book-illumination after 1500 declines in quantity and quality, nevertheless the idea of a "break in the tradition" seems to us not quite justified. The usage of the term "break" is clearly an application of an historical concept which fits the Latin West by characterizing the great differences between the Mediaeval and the Renaissance periods, but in the Christian East the mediaeval ages did not come to an end around 1500 and in the field of manuscript illumination the evidence is manifold that miniature cycles of the sixteenth and seventeenth centuries and occasionally even of the eighteenth merely continue an older, indigenous tradition.

Buchthal and Kurz concede this continuation only for the Armenian manuscripts, but it can, we believe, also be demonstrated for the other provinces of the East where Christian manuscripts were made. As for the Syriac manuscripts, Buchthal and Kurz disprove their own statement by quoting two later Nestorian lectionaries, one in the Vatican, cod. Borgian, syr. 169 from the year 1546, and the other in the Library of the Holy Sepulchre in Jerusalem, cod. syr. 1, from the year 1679, with scenes from the New Testament which stem from models of the thirteenth century. In the field of Arabic manuscripts, Miss Der Nersessian quotes several illustrated copies of the Barlaam and Joasaph story which, down to the eighteenth century, continue the older mediaeval tradition (*L'Illustration du Roman de Barlaam et Joasaph*, 1937, p. 29). A picture of David in the front of a psalter manuscript in London, Brit. Mus. cod. Harley 5460 from the year 1699, also still reflects an old type. Similar evidence can be found in Coptic manuscripts. A Gospelbook in London, cod. orient. 1316 from the year 1663 may be quoted, which contains among the other



evangelists a figure of Mark that is a very close copy of the Luke of Paris (*Institut Catholique*), published by Buchthal and Kurz as title picture to their list. It is true, of course, that in certain Ethiopic manuscripts a strong Western influence appears in the sixteenth century, but even here it is not wholly prevalent and there are other manuscripts which remain untouched by it, as, e.g., the evangelist pictures of a seventeenth-century bible in London, cod. orient. 481. A Georgian Gospelbook of about the seventeenth century in the Public Library in Leningrad, cod. georg. 298, shows sufficient middle-Byzantine traces to provide the evidence that also in this East Christian province the older tradition had not entirely subsided after 1500. These examples may suffice to show how much it is to be regretted that Buchthal and Kurz did not include the manuscripts of later centuries in the handlist. Their number, with the exception of Armenian manuscripts, is comparatively small, and it would in some cases have saved scholars, who want to collect the fullest possible iconographical or even stylistic evidence for certain recensions or groups of East Christian manuscripts, the labor of going through once more the whole bibliography.

In the following lines, we would like to add a few more manuscripts which we have missed in Buchthal's and Kurz's list. These additional notes constitute no attempt to bring Buchthal's and Kurz's list as fully as possible up to date, but they are merely excerpts from the writer's notes. It is to be hoped that other reviewers may join in the effort to supplement the wellstarted handlist.

#### *Syriac Manuscripts*

1. Homs, Jacobite Bishop. Gospels of the Heracleian version. Eusebius' Letter and Canon tables with decorations and figure subjects. Written A.D. 841 in the monastery Mar Iba by a certain Basil. M. L. Delaports, "Rapport sur une mission scientifique à Charfé (Liban)," *Nouvelles Archives des missions scientifiques* xv, fasc. 1, 1907, p. 42, with 2 plates.

2. London, Brit. Mus. Add. 7165. Gospels of the thirteenth century with the pictures of three evangelists.

#### *Arabic Manuscripts*

B. and K.'s handlist no. 67, Baltimore, Garrett 313B. This manuscript which contains only two ornamental headpieces now belongs, together with all other manuscripts of the Garrett collection, to the University Library of Princeton, N. J.

#### *Coptic Manuscripts*

1. Leningrad, formerly Coll. Lichatchev. Fragment of a bust of Christ from approximately the ninth century. Likhatchev, *Materialy dlja istorii Russkago ikanopisanija* ii, 1906, pl. CCCLV, no. 696.

2. New York, Pierpont Morgan Library M594. Synaxary of the ninth century. It contains on fol. 1<sup>v</sup> a standing figure of St. Cyril. Check list, no. 38.

3. Rome, Biblioteca Vaticana copt. 8. The Four Gospels. Coptic and Arabic. Beg. of thirteenth century. It contains pictures of Mark and Luke standing and an ornamental cross as frontispiece. Codices Vaticani Coptici, pp. 19-23.

One misses a more complete reference to Gregory's list in *Textkritik des Neuen Testamentes*, in which several manuscripts in Cairo with miniatures are mentioned, as, e.g., a Gospelbook dated 1184 A.D., a second from the year 1272 A.D., and a third dated 1327 A.D. (*loc. cit.* pp. 542-3, no. 36, 39, 41), all three apparently with pictures of the evangelists.

In the bibliography to the El-Hamouli manuscripts in the Morgan Library in New York, a reference is lacking to the publication *Manuscripts Coptes de la Bibliothèque du Couvent de El-Hamouli*. (XXIV *Fac-similes*, Paris, 1911) in which most of the miniatures are reproduced in colotype. Since so many of the Morgan manuscripts are dated in the ninth and tenth centuries, this album is of particular importance for the study of Coptic book illumination.

B. and K.'s handlist no. 209. P. Morgan M. 571. Besides ornamental decoration, there is part of a human figure preserved which once occupied the full height of the first folio.

#### *Armenian Manuscripts*

1. Baltimore, Walters Art Gallery 538. Gospels written A.D. 1193 in the monastery of Paughoskan, in Cilicia, for Bishop Ter Karapet. Eight Canon tables of high quality. Ricci i, p. 761, no. 25.

2. Baltimore, Walters Art Gallery 540. Gospels written A.D. 1475 by Aristakes for the priest Hakob. 16 full-page miniatures with christological scenes precede the text which is decorated by the portraits of the four evangelists and a considerable number of marginal illustrations. Ricci i, p. 762, no. 29.

3. Baltimore, Walters Art Gallery 541. Gospels of the fifteenth century, written by Hovanes and illuminated by Melkhon for a woman named



Napath who gave it to a church of St. Sargis. Canon tables, portraits of the four evangelists, 4 headpieces with figured initials, and 13 marginal illustrations of christological scenes. Ricci i, p. 761, no. 26.

4. Baltimore, Walters Art Gallery 542. Gospels written A.D. 1488. Eusebius' letter and Canon tables, the portraits of the four evangelists, and 4 headpieces with figured initials. Ricci i, p. 762, No. 31.

5. Baltimore, Walters Art Gallery 543. Gospels written A.D. 1455 by Hohannes in the monastery of Gamaliel. Canon tables, portraits of the 4 evangelists, 4 title pages, 22 full-page miniatures and 18 marginal illustrations and numerous marginal ornaments. Ricci i, p. 762, no. 28.

(Miss D. Miner kindly informs me that W. 544, which Ricci (*op. cit.*, no. 28) dates in the fifteenth century, is dated A.D. 1666).

6. Boston, Public Library 1327. Gospels written A.D. 1475 by the monk Gregory in the monastery of the son of Hussig. 40 miniatures at the beginning. Ricci i, p. 924, no. 34.

7. Etchmiadzin 23 G. Four Gospels written A.D. 1045 by Yusik at the time of the Catholicos Ter Petros. Macler lists three scenes from the New Testament and the pictures of the four evangelists. Macler, *Nouvelles Archives* xix, 2nd fasc. 1910, p. 37-39.

8. Etchmiadzin 369/311. Four Gospels, written A.D. 1066 by the priest Grigor. According to Macler, there are preserved the picture of Mark and the frontispieces to Matthew, Mark and Luke. Macler, *Nouvelles Archives* xix, 2nd fasc. 1910, p. 45-50.

9. Etchmiadzin 1058. Gospels from Thargmantchats. Written A.D. 1202. Portraits of the evangelists and scenes from the New Testament. Macler, *Journal asiatique* 1912, p. 184; Tchobanian, *Roseraie d'Arménie* iii, pp. 80, 180, 225; idem, *Pages arméniennes*, p. 56, fig. 28; Der Nersessian, *Manuscrits Arméniens illustrés des XII<sup>e</sup>, XIII<sup>e</sup> et XIV<sup>e</sup> siècles*, 1936, pp. 18, 27, 32, 33, 41-43, 73, 83, 123.

10. Florence, Biblioteca Laurenziana, Plut. I, 11. Lectiones et Acta. thirteenth-fourteenth cent. On fol. 132<sup>b</sup>, drawing of head of Christ. Macler, *Journal asiatique* 1913, Pt. II, p. 269.

11. Florence, Biblioteca Laurenziana Ashburnham 1089. Liber ordinationis. A.<sup>o</sup> 1232-33 A.D. On fol. 3<sup>v</sup>: Gregory the Illuminator. Macler, *Journal asiatique* 1913, Pt. II, p. 281.

12. Istanbul, Serai Library 124. Gospels. Thirteenth century. Portraits of the evangelists and scenes of the New Testament. A. Deissmann, *Forschungen und Funde im Serai*, 1933, p. 133, no. 124.

13. Izmit (Aziz Ogan no. 33<sup>10</sup>). Gospels thirteenth-fourteenth century. Four miniatures, presumably of the four evangelists. A. Deissmann, "Handschriften aus Anatolien in Ankara und Izmit," *Zeitschrift fuer die Neutestamentl. Wissenschaft* xxxiv, 1935, p. 271, no. 10.

14. Izmit (Aziz Ogan no. 21<sup>10</sup>). Gospels. Fourteenth century with 20 miniatures. A. Deissmann, *loc. cit.*, p. 271, no. 11.

15. Jerusalem, Armenian Patriarchate 1796. Gospels twelfth century. Pictures of the four evangelists. S. Der Nersessian, *Manuscrits Arméniens illustrés des XII<sup>e</sup>, XIII<sup>e</sup> et XIV<sup>e</sup> siècle*, Paris 1936, pp. 89-95, 100, 101, 128, 160, n. 3.

16. Jerusalem, Armenian Patriarchate 1924. Gospels eleventh century. Miniature with the 4 evangelists. Der Nersessian, *op. cit.*, pp. 17, 19, 73, 126.

17. Jerusalem, Armenian Patriarchate 1973. Gospels written 1346 A.D. for the queen Mariun at Sis. 8 miniatures with scenes from the New Testament. Der Nersessian, *op. cit.*, pp. 7, 139, 149, 156, 157, 160-162.

18. Leiden, University Library, Or. 5498. Gospels written 1454 A.D. in the monastery of Parouagrak by the scribe Karapet Hayrpet. Miniatures of the four evangelists and the Virgin and Child. Macler, *Nouvelles archives des missions scientifiques* 22, 1924, p. 370, no. 38.

19. Leipzig, University Library 1098B. Hymns, fourteenth-fifteenth centuries. Marginal miniatures of the Virgin, S. Anthony, David, etc. Macler, *Journal asiatique* 1913, Pt. II, p. 640.

20. New York, Pierpont Morgan Library, M. 749. Gospels written in 1464 A.D. Preceding the text are 14 full-page miniatures with scenes from the New Testament, and in front of each Gospel the portrait of the author. *The Pierpont Morgan Library* 1924-1929, New York, 1930, p. 67.

21. Paris, Bibliothèque Nationale, armén. 66. Hymnary. Written A.D. 1319 in Sis by Sargis Pidzak. Marginal miniatures and ornaments. Der Nersessian, *Manuscrits Arméniens illustrés*, p. 138.

22. Paris, Bibliothèque Nationale armén. 183 (olim: suppl. armén. 146). Menologion written in the fifteenth cent. and rebound 1488 A.D. Miniature of Virgin and Child. Macler, *Catalogue des Mss. armén.* 1908, p. 102.

23. Princeton, N. J., University Library. For-

merly Garrett Collection, Baltimore. Gospels written A.D. 1449. Eight full-page miniatures with scenes from the New Testament and pictures of the four Evangelists. Ricci i, p. 868, no. 18 (here wrongly dated sixteenth century).

24. Princeton, N. J., University Library. Formerly Garrett Collection, Baltimore. Single miniature of Matthew from a Gospel which was written ca. 1311 A.D. and illuminated by Toros Sargavak. The manuscript, which comes from Tabris, has been cut up and other miniatures of it are now in the collections of Hazarian in New York, Chester Beatty in London, and Kurdian in Wichita, Kansas. H. Kurdian in the *Princeton University Library Chronicle* iv, 1943, pp. 109 ff., with plate.

25. Rome, Biblioteca Vaticana arm. 24. Hymnary fifteenth century and restored A<sup>o</sup> 1491-92 A.D. Miniatures of David, Christ, John the Baptist, S. Rhipsimia, and Virgin with Child. Eug. Tisserant, *Codices Armeni Bibliothecae Vaticanae*, Rome 1927, pp. 301 ff., no. 24.

26. Rome, Biblioteca Vaticana Borg. arm. 68. Gospels written in 1357 A.D. Pictures of three evangelists (Matthew missing) and a number of marginal illustrations with scenes from the New Testament. Tisserant, *op. cit.*, pp. 117 ff., no. 68.

27. Rome, Biblioteca Vaticana Borg. arm. 69. Gospels written A.D. 1360-61. Miniature of Christ enthroned between Virgin and John. Tisserant, *op. cit.*, pp. 119 ff., no. 69.

28. Rome, Biblioteca Vaticana Borg. arm. 70. Gospels of the fourteenth century with numerous marginal illustrations from the New Testament. Tisserant, *op. cit.*, pp. 120 ff., no. 70.

29. Rome, Biblioteca Vaticana Borg. arm. 84. Nersesis Lambronatsi opera et vita; written A.D. 1325. Portrait of Nerses and marginal illustrations. Tisserant, *op. cit.*, p. 177, no. 84.

30. Tübingen, Universitäts Bibliothek M. A. XII. 22. Hymnary. Written at Sis A.D. 1316 for the priest Barthoghimeos by the scribe Sargis (probably Sargis Pidzak). Marginal illustrations. Der Nersessian, *Manuscripts arméniens illustrés*, p. 138.

31. Venice, San Lazzaro 141 (102). Gospels from the end of the twelfth century. Miniatures representing scenes from the New Testament. Der Nersessian, *op. cit.*, pp. 18, 80 and passim.

32. Venice, San Lazzaro 250 (168). Gospels written 1313 A.D. by the copyist Rstakes in the monastery of Miaketser. Marginal miniatures with scenes from the New Testament. Der Nersessian, *op. cit.*, pp. 155, n. 2; 165, n. 5.

33. Venice, San Lazzaro 280 (10). Bible,

Painted between A.D. 1418-1422 by Mkrtitsch Nakhach at Khlat in the region of Van. Miniatures. Der Nersessian, *op. cit.*, pp. 163, n. 1; 166, n. 1.

34. Venice, San Lazzaro 546 (109). Gospels written A.D. 1304. Ornaments including the symbols of the evangelists. Der Nersessian, *op. cit.*, pp. 90, 117, n. 4.

35. Venice, San Lazzaro 938. Gospels. Written A.D. 1205. Portraits of the four evangelists.

36. Venice, San Lazzaro 942 (91). Gospels, written A.D. 1428 in the monastery of Maghard by Grigor. Marginal illustrations with scenes from the New Testament. Der Nersessian, *op. cit.*, pp. 155, n. 2; 166.

37. Venice, San Lazzaro 961 (87). Gospels, written A.D. 1181 by Hovhannes in the monastery of Horomos near Ani. Canon tables and portraits of the standing evangelists. Der Nersessian, *op. cit.*, pp. 4, 18 and passim.

38. Venice, San Lazzaro 1008 (265). Oskephorik (Mélanges). Written A.D. 1317-1318. Two juxtaposed miniatures with Virgin and Child on one side and Grigoris with his wife Mamakhathun on the other. Der Nersessian, *op. cit.*, p. 111.

39. Washington, D. C., Freer Gallery of Art (32.18). Gospels of the thirteenth century. Written for Paron Vasak and painted in the style of Toros Roslin. Contains more than 100 scenes from the New Testament. Ricci i, p. 469, no. 12. Der Nersessian, *op. cit.*, pp. 69, 95, 98, 100, 127, 155.

40. Wichita (Kansas), H. Kurdian Collection. Single miniature of St. Luke from a Gospel written ca. 1311 A.D., and illuminated by Toros Sargavak. Other miniatures of the same manuscript in New York Coll. Hazarian, London Coll. Chester Beatty, and Princeton University Library. Kurdian, in the *Princeton University Library Chronicle* iv, 1943, p. 110 and plate.

In B. and K.'s handlist between no. 453 and 454. The miniatures of the romance of Alexander, formerly New York, Gregor Aharon, are now in Princeton University Library to which they were given by Robert Garrett of Baltimore.

No. 491. The leaves formerly in the Rosenberg collection, Paris, are now in New York, Hazarian Collection. Kurdian, in *Princeton University Library Chronicle* iv, 1943, p. 110.

#### Georgian Manuscripts

1. Andover, Mass. The Bert'ay Gospels tenth cent. Canon tables and portraits of the evangelists. R. P. Blake and S. Der Nersessian, *Byzantion*

xvi, 1942-1943, pp. 226-285 figs. 1-2, 5, 7, 9-11, 13 and 15.

2. Tiflis, Museum, The Alavard-Gospels. Written in 1054 at the monastery of Kalipos in Bithynia. Canon tables and portraits of the evangelists. Th.D. Zordania, *Opisanie gruzinskikh rukopisej Tiflisskago Cerkovskago Museja Kartalino-Kakhetinskago Duchovenstva* ii, Tiflis, 1902, pp. 46-51; *Materialy po Arkheologii Kavkaza* vii, pp. 10-20.

3. Tiflis, Museum, No 1667, Djruč Gospels. Written in 936 in the monastery of Šatherd. Canon tables added in 940. Miniatures of the Virgin, the four evangelists and some Gospel scenes. M. Brosset, *Rapport sur un voyage archéologique dans la Géorgie et dans l'Arménie exécuté en 1847-48*, St. Petersburg, 1850-1851, 12<sup>th</sup> rapport, pp. 83-84; Th.D. Zordania, *Opisanie Gruzinskikh rukopisej*, etc. i, p. 89; N. Kondakov, *Opis pamjatnikov drevnosti nekotorykh khramach i monastyrych Gruzii*, St. Petersburg, 1890, pp. 153-4; J. Baltrasutis, *Études sur l'art médiéval en Géorgie et en Arménie*, Paris, 1929, p. 27, fig. 38; idem, *Art sumérien, art roman*, Paris, 1934, p. 12, n. 3.

4. Tiflis, Sion Cathedral 32. Gospels with scenes from the New Testament. Millet, *Recherches sur l'iconographie de l'évangile*, p. 81, note 2.

5. Tiflis, Sion Cathedral. Menaeon of the eleventh century. Written by Zacharias the Iberian. 81 miniatures with scenes from the lives of saints and the New Testament; Kondakov, *Opis pamjatnikov drevnosti v nekotorykh khramach i monastyrych Gruzii*, St. Petersburg, 1890, p. 166; Strzygowski, *Das Etschmiadzin Evangeliar*, 1891, p. 79; N. Pokrovskii, *Evangelie v pamiatnikakh ikonografii*, 1892, p. XLIX, and *passim*, fig. 70. Millet, *Recherches*, p. 181, note 20; 194, note 1.

PRINCETON, N. J.

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OLD ORAIBI, A STUDY OF THE HOPI INDIANS OF THIRD MESA, by Mischa Titiev. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University. Vol. XXII, No. 1. Pp. xi+277; pls. 4; charts 11; tables 10, 13 ills. in the text. Cambridge, Massachusetts, 1944. \$4.50.

Because it presents a vivid example of ruins in the making, shows so clearly the progressive disintegration and decay accompanying the transition from a thriving village to an archaeological site, Old Oraibi in the Hopi country of northern Arizona has long been a favorite visiting place for southwestern archaeologists familiar with its

history. Those returning to it at intervals over a span of years have seen with their own eyes processes producing conditions such as are revealed in excavations and thus have been able to interpret more correctly evidence which they uncover. Throughout the period from the coming of the Spaniards in 1540 until 1906 it was the largest and most important of the towns in the Hopi province. In the latter year internal dissension and strife culminated in a sudden withdrawal of half the population and the establishment of a new village seven miles north of the original community. Subsequent years saw additional, although smaller, groups break away and found two more villages, and others take up permanent residence in a distant farming colony with the result that Old Oraibi lost the greater part of its inhabitants. From a town of 150 households and approximately 600 people in 1906 it has been reduced to one of 25 households and about 100 individuals.

At the time of the original secession those departing to form the new village were permitted to take with them only such personal possessions, food, and bedding as they could carry. Other belongings and much of the communal ceremonial paraphernalia were abandoned, being left just where they happened to be in the houses and ceremonial chambers. Much of this material was never retrieved and there it has remained untouched, for the most part, by those continuing to live in the old community. Where it is still possible to enter the deserted houses, many are now only heaps of rubble, one may see—almost buried by infiltrations of dust and blow-sand, by falling ceilings and crumbling masonry—standing along the walls and in the corners of storage rooms large pottery jars containing the remains of dried peaches, beans, and other vegetal products. On long-cold hearths are vessels, the bottoms of which are encrusted with the desiccated vestiges of food that was being cooked on the day of the fateful break, and scattered over the floors are implements and utensils of various kinds, even articles of clothing that were left behind. These constitute precisely the kinds of assemblages that archaeologists encounter in their digging and it has been extremely instructive to watch the manner in which they gradually become buried beneath the débris of collapsing houses. Oraibi has more to offer than this, however, and it is possible that in the story of its disruption and decline there is, by analogy, an explanation for the abandonment

of many of the great communal centers of the Pueblo peoples in the late twelfth and early thirteenth centuries. For this reason the present work is of more than passing interest to those concerned with the pre-Spanish Southwest.

Dr. Titiev's objective was an ethnological study of the Third Mesa Hopi, exclusive of linguistics, and as Oraibi was the only town on Third Mesa until the eventful year of 1906 it was obvious that a thorough knowledge of its former populace was essential to an understanding of all the villages. He therefore searched out all the information available on the social organization and the manner of its functioning before the break, carefully analyzed the various incidents contributing to that *débâcle*, considered the phenomena of disintegration as exemplified in the village, studied the dispersal of the secessionists and their recently-founded towns of Hotevilla, Bakavi, and New Oraibi, and worked with the old inhabitants who still hold allegiance to Old Oraibi but have settled permanently in the farming colony of Moenkopi forty miles westward.

The extensive report on the results of the investigations and the author's conclusions regarding their significance are arranged in four parts. The first concerns the social organization and its numerous ramifications in: the kinship system; the reciprocal behavior of kindred; courtship, marriage, and divorce; households, lineages, and the clan-phratry problem; the amorphous Hopi state; the disintegration of Oraibi; and Oraibi ethnology and Pueblo archaeology. There is much of value in the discussion of these various phases of the subject, but the historically and archaeologically-minded reader probably will find the last three topics to be of greatest interest. From the discussion of the political organization and such common law as may be said to exist it is apparent, as Dr. Titiev points out, that "the Hopi do not have the gift of statecraft" and it is easy to understand how factions grow and splits develop in a community. The chapter on the disintegration of the village outlines its history from the arrival of Espejo's expedition in 1583 to the present, describes in detail the many factors involved in the bickering that brought about the division, gives an exciting picture of the events on September 7, 1906, when actual civil war was prevented only by the withdrawal of half the populace, and chronicles the subsequent life of the village and attendant dying out of various cultural elements. What the archaeologist can

learn from Oraibi, in addition to the things mentioned in an earlier paragraph of this review, is suggested in a competent and logical discussion in the chapter pertaining to Oraibi ethnology and Pueblo archaeology.

The second part of the report deals with Hopi ceremonialism, a subject frequently investigated *per se* by students of the Pueblo peoples but one worthy of further consideration because it has considerable significance in its broader aspects. Dr. Titiev concludes from his work "that the religious beliefs and practices of the Hopi have been devised to serve as a super-natural buttress to support the weakest points of their social organization." The various subjects covered in this portion of the paper are: the basic pattern and underlying concepts of Hopi ceremonies; the *Katcina* Cult; tribal initiation; Solstitial and Solar ceremonies; customs and rituals relating to war; women's ceremonies; and the scheme of Hopi ceremonialism.

Part Three is composed of miscellaneous chapters on various aspects of Hopi culture. Part Four is an appendix containing a list of the major ceremonies held at Oraibi, the names of the chiefs of ceremonies prior to 1900, the ritual calendar, data on the kivas or ceremonial chambers, the statement and agreement between the opposing factions following the break, the text of a portion of a letter from the absent chief to his people in Oraibi, an account of an inter-Pueblo council of chiefs, and a short description of a ceremony held at a Second Mesa village. The material in these two parts of the report is mentioned or briefly summarized in the portions of the first and second parts where it is pertinent but is not given in detail there in order that the main theme of the discussion not be obscured by minutiae. This arrangement is helpful to the reader and has been handled quite successfully by the author. In addition there is an extensive bibliography and a topical index and glossary of native terms.

Dr. Titiev's report shows the merit of a careful and exhaustive study of a subject and is a definite contribution to the literature on the Pueblo peoples of the Southwest.

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ARCHAEOLOGY OF NORTHWESTERN VENEZUELA,  
by Alfred Kidder II. Pp. 178, pls. 18, tables 3,  
text ill. 62. Papers of the Peabody Museum of



American Ethnology and Archaeology, Harvard University, Vol. 26, No. 1, Cambridge, 1944. \$3.75.

Dr. Alfred Kidder II has produced in the *Archaeology of Northwestern Venezuela* a basic volume for the archaeology of this country, which has up to now received so little attention from archaeologists. His publication is based on field studies and reconnaissance in 1933 and 1934, so that this study antedates the later research, now beginning to appear, by Dr. Cornelius Osgood, Irving Rouse, and their associates in the Peabody Museum of Yale University.

Kidder's work is divided into four background sections for geography, history, ethnology, and archaeology, followed by three sections on formal excavations at La Cabrera and San Mateo in the region of Lake Valencia, and one in the Trujillo area to the west. Three other sections describe reconnaissance in the Valley of Aragua, the state of Lara, and the states of Trujillo and Merida. Finally, there is an exhaustive section on the relationship of Venezuelan archaeological cultures to each other and to the cultures outside the Republic. The work of the 1933 season was partially supported by the Venezuelan government at the insistence of Dr. Rafael Requena, and the 1934 season was financed by a Rockefeller grant in research under the direction of the Division of Anthropology of Harvard University.

Kidder's approach to his problems is competent in the extreme. His formal excavation reveals a mastery of technique and high powers of observation. He has combed the literature as well, and in his concluding section has examined closely the materials from adjoining areas. He reveals generosity to other workers in the field, and his own tentative conclusions, although judicious, are far from timid.

Kidder distinguishes two phases: an early phase, La Cabrera, and a later, Valencia. The archaeological deposits were of such character, being mainly lacustrine, that a more finely segregated sequence was impossible. Kidder believes that his material tends to support the hypotheses of Rainey and Rouse, that the Crab culture of Puerto Rico and the Lesser Antilles had its origins on the South American mainland, although Kidder is of the opinion that the origins should be sought farther west in Venezuela and Colombia, rather than to the southeast in Marajo and the Guianas. The author is very hesitant about accepting in toto the conception of a Central Ameri-

can origin for Venezuelan culture. He believes that there are too many uninvestigated areas in Venezuela and Colombia not to take into account the possibilities of local origins and perhaps the passage of traits from northern South America to the north.

This is the first major report of Dr. Kidder, and records a splendid debut by this gifted son of a gifted father. It represents an awareness of the necessity of using the fruits of research in other scientific disciplines, as well as the need to examine historical and ethnological sources. Kidder's statement of problems is in itself a most eloquent plea for the necessity of intensified research in northern South America.

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EXCAVATIONS AT TAJUMULCO, GUATEMALA, by Bertha P. Dutton and Hulda R. Hobbs. With appendices by T. D. Stewart on the skeletal remains and by W. C. Root on the copper objects. (Monographs of the School of American Research, No. 9, Santa Fe, New Mexico, Nov. 1, 1943). Pp. xii+124, figs. in text, 101, pls. II, maps v, frontispiece. University of New Mexico Press, Albuquerque, New Mexico, 1943.

This is a report on the excavation of a small site in the department of San Marcos in the southwestern corner of the Republic of Guatemala. It is a particularly significant contribution to Middle American archaeology because, among other things, it is one of the first full-length reports to appear in print on this important highland area, and because it adds greatly to our knowledge of Plumbate pottery. This ware was traded widely at a certain critical period and serves as one of the most important chronological markers throughout a large portion of Middle America.

Tajumulco is in rugged mountainous country, the site occupying a small terrace or tongue of land on the edge of a deeply cut stream. The architectural remains are not impressive, consisting of several stone-faced mounds and terraces with crude slab stairways and surrounding small plazas. Below the floors of these plazas were a number of stone cists or tombs of small size containing burials and usually equipped with pottery vessels and other objects. A number of carved stone monuments were found, including a large rounded stone with a depression on top and with figures carved in relief on the sides, and several monolithic tables of a kind not previously known.



The human faces carved in low relief on the monuments are peculiarly square and with the nose in the form of an inverted T. A number of the Plumbate vessels consist of elaborate effigy forms. Other kinds of objects described from the site include various chipped stone implements, grinding stones, celts, stone beads, clay masks, spindle whorls, whistles, mosaic mirrors, a number of copper bells and a finger ring, and one small disc of gold.

Plumbate pottery has been found in varying amounts at sites located all the way from Costa Rica to Nayarit in Western Mexico. It has served to correlate in time such important cultures as the Mazapan or Toltec in Central Mexico and the Mexican Period at Chichen Itza, but previous to the work at Tajumulco its place of origin was purely a matter of speculation. Its abundance here, however, seems to imply that this site was within the area in which it was manufactured. This allows a much more precise estimate of its historical and chronological significance.

Adding to the historical importance of Tajumulco is the fact that it appears to have been occupied for a relatively short period of time. The authors mention certain buried walls which they think may belong to an earlier period, but the

lack of any pottery from cultures known to be earlier in the highlands makes it likely that all the materials from the site can be ascribed to the single Plumbate horizon. This allows the association of all the materials at the site, including the stone sculptures, usually difficult to place in a ceramic sequence. Sites of this kind, with occupation restricted to a short period of time, are of great importance in filling out our knowledge of the cultural content of the phase to which they belong.

The authors have obviously made careful and well-controlled excavations and have presented the material in a systematic, well illustrated, and very usable monograph. Their conclusions as to the affinities of the Tajumulco culture with other areas are somewhat vague, and all of the opportunities for placing the material in the general framework of Middle American history have not been fully exploited. This portion of the work is, however, frankly conjectural and its restriction does not detract from the value of the monograph as an important source of basic material on the archaeology of the Guatemala highlands.

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PLATE VII.—SPHINX FROM THE GRAVESTONE SHOWN IN FIG. 1, p. 323  
Courtesy of the Metropolitan Museum



PLATE VIII.—WARRIOR MOUNTING A CHARIOT, FROM THE GRAVESTONE SHOWN IN FIG. 2, p. 324  
Courtesy of the Metropolitan Museum



PLATE IX.—PANEL OF THE GRAVESTONE SHOWN IN FIG. 2, p. 324  
Courtesy of the Metropolitan Museum

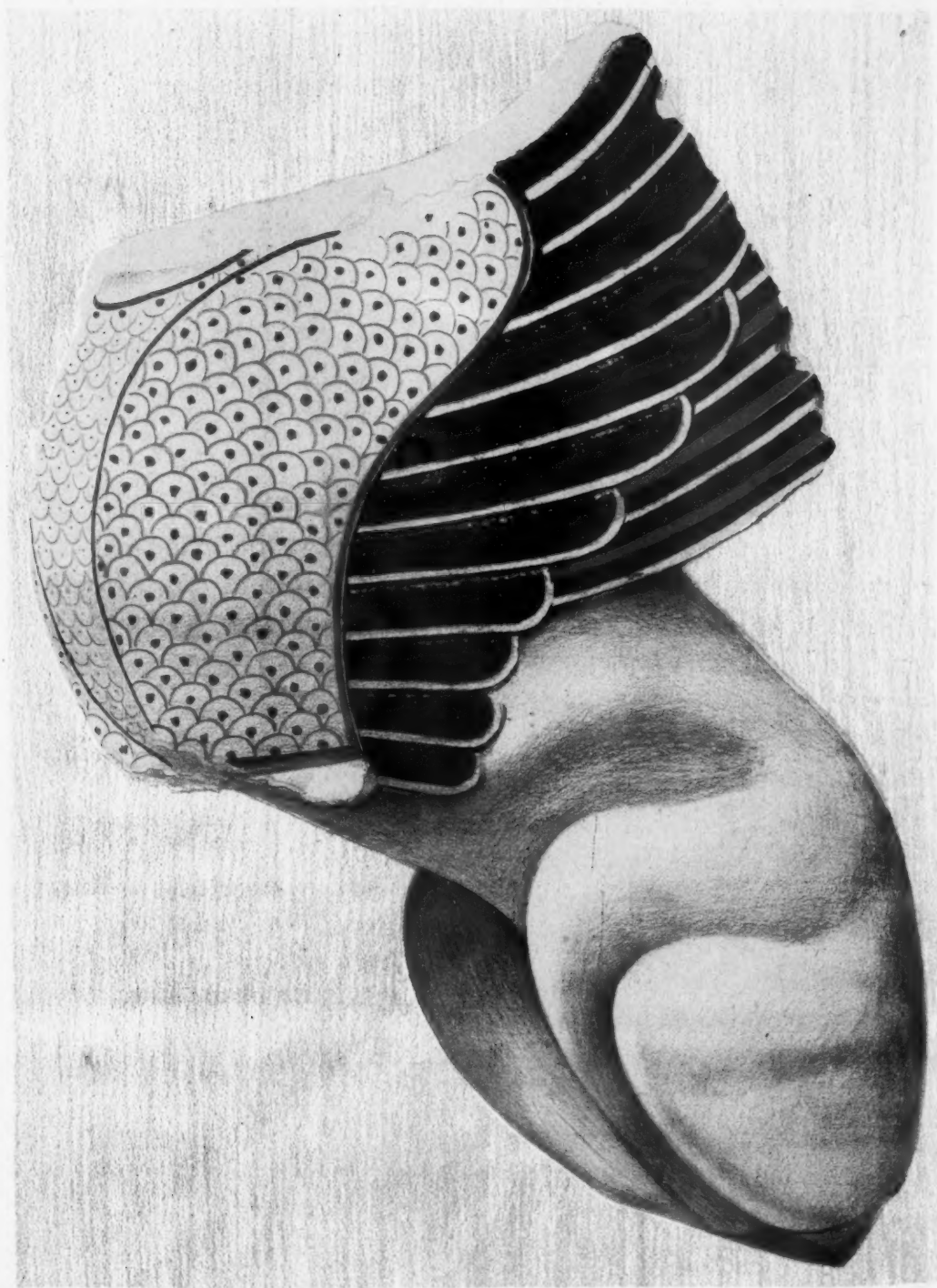


PLATE X.—PART OF A LIMESTONE SPHINX, ABOUT 560 B.C.  
Courtesy of the Metropolitan Museum





PLATE XI.—TENTATIVE RECONSTRUCTION OF THE SCENE SHOWN IN PL. VIII, BUT WITH HELMETS,  
SWORD, SPEAR, BELT, EYES, AND FLESH ALSO COLORED  
Courtesy of the Metropolitan Museum